

# BIHAR ELECTRICITY REGULATORY COMMISSION



## Order on

Performance Review for FY 2013-14 and  
Determination of Aggregate Revenue Requirement  
Tariff for FY 2014-15

For

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

**Case No. 22 of 2013**

**28<sup>th</sup> February 2014**



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## 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

NTPC	National Thermal Power Corporation
O&M	Operation and Maintenance
PGCIL	Power Grid Corporation of India Limited
PTC	Power Trading Corporation
R&M	Repair and Maintenance
RE	Revised Estimates
REA	Regional Energy Accounting
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
SAC	State Advisory Committee
SBPDCL	South Bihar Power Distribution Company Limited
SERC	State Electricity Regulatory Commission
ToD	Time of Day
TPS	Thermal Power Station
UI	Unscheduled Interchange
ULDC	Unified Load Despatch Centre





## Bihar Electricity Regulatory Commission

Ground Floor, Vidyut Bhawan – II  
Jawahar Lal Nehru Marg, Patna – 800 021

### Case No. 22 of 2013

#### In the matter of:

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

And

Bihar State Power Transmission Company Limited..... Petitioner

Present:

<b>U.N. Panjiar</b>	-	<b>Chairman</b>
<b>S.C. Jha</b>	-	<b>Member</b>

### ORDER

(Passed on 28<sup>th</sup> Day of February, 2014)

The erstwhile Bihar State Electricity (BSEB) has been restructured on functional basis with affect from 1<sup>st</sup> 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 generation, transmission and two distribution companies on 14<sup>th</sup> November, 2012 along with the petition for true up of ARR of FY 2011-12 of erstwhile BSEB, Review of ARR for FY 2012-13 for all companies and determination of ARR for generation and transmission companies separately and for two distribution companies combinedly. The Commission has completed true up exercise for FY 2011-12 and reviewed ARR and revenue for FY 2012-13 of erstwhile BSEB and successor BSPHCL and also approved the ARR for the years FY 2013-14 to 2015-16 for BSPGCL, BSPTCL separately and for the two distribution companies' viz. NBPDC and SBPDCL combinedly in the order dated 15<sup>th</sup> March, 2013.

BSPTCL has now filed the petition for Annual Performance Review (APR), Review of ARR of FY 2013-14 and re-determination of ARR and Transmission tariff for FY 2014-15.

In exercise of the powers vested in to 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 issues this order, Reviewing the ARR for FY 2013-14, 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) to NBPDC and SBPDCL 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 Commission's Fees, Fines and charges, Regulation on or before 15<sup>th</sup> November of the preceding year. Accordingly the BSPTCL filed the petition for 'Review' of ARR of FY 2013-14 and determination of revised ARR for FY 2014-15 and for Transmission tariff for FY 2014 – 15.

Regulation 22 of the 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.

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 vide letter no. 1569 dated 30.11.2013 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 3<sup>rd</sup> January 2014. However, on request from some stakeholder's, the Commission extended the last date of submission up to 31<sup>st</sup> January 2014. The petition was also placed on the BSPTCL's website.

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 10<sup>th</sup> January, 2014.

The above petition submitted by BSPTCL was also placed before the State Advisory Committee on 23<sup>rd</sup> January 2014 and the various aspects 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.

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

BSPTCL has estimated the annual revenue requirement of Rs. 601.03 crore in the review for FY 2013-14 (RE) against which the Commission has approved Rs. 213.26 Crore. BSPTCL has projected the revised annual revenue requirement of Rs. 687.79 Crore for FY 2014-15 against which the Commission has approved Rs. 270.60 Crore. The Commission has also approved the transmission charges of Rs. 22.55 Crore per month against Rs. 57.32 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. Transmission tariff for FY 2014-15 will be 17 Ps/ kWh on the quantum of energy approved by the Commission for transmission by BSPTCL.

**This order shall be effective from 1<sup>st</sup> April 2014 and shall remain in force till 31<sup>st</sup> March 2015 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 BSPGCL, 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. Panjari)**  
Chairman

# 1. Introduction

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## 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 15<sup>th</sup> 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 Background and Brief History**

#### **1.3.1 Bihar State Power Transmission Company Limited**

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 1<sup>st</sup> 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 (NBPDC)
- 5) South Bihar Power Distribution Company Limited (SBPDCL)

The Government of Bihar vide notification dated 30<sup>th</sup> October, 2012, notified the provisional opening assets and liabilities of the transferee companies based on the audited account of erstwhile BSEB as on 1<sup>st</sup> 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.

### **1.3.2 Background**

The Bihar State Power Transmission Company Limited (herein after referred to as BSPTCL or Petitioner) has filed its Petition for Annual Performance Review for FY 2013-14, Revised Annual Revenue Requirement for FY 2014-15 and re-determination of Transmission Charges for FY 2014-15 under Section 62 of the Electricity Act, 2003, read with Bihar Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2007 (hereinafter referred as 'BERC Tariff Regulations, 2007').

### **1.4 Commission's Orders issued earlier**

The chronology of the filing of tariff petitions and issue of Tariff Orders from FY 2006-07 are listed below:

The BSEB had submitted its first Aggregate Revenue Requirement (hereinafter referred to as "ARR") and tariff petition for the FY 2006-07 on 10<sup>th</sup> April, 2006. The Commission passed the Tariff Order on that petition on 29<sup>th</sup> November, 2006.

The BSEB submitted its ARR and tariff petition for FY 2007-08 on 18<sup>th</sup> December,

2007. As the tariff petition for FY 2007-08 was filed very late, the Commission vide letter no. BERC.Tariff-9/07-03 dated 2nd January 2008 directed the BSEB to file the ARR and tariff petition for FY 2008-09 along with data as specified by the Commission in the BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 by 31<sup>st</sup> January 2008.

The BSEB submitted its ARR and tariff petition for FY 2008-09 on 14<sup>th</sup> February, 2008. The Tariff Order for FY 2008-09 was passed by the Commission on 26<sup>th</sup> August, 2008. The Commission also undertook the "Review" of ARR for FY 2006-07 along with Tariff Order for FY 2008-09.

The BSEB filed on 9<sup>th</sup> October 2009 the petition for determination of ARR and approval of retail tariff for FY 2009-10. However, due to delay in filing of the ARR/ tariff petition for FY 2009-10, the Commission directed the BSEB to file the ARR and tariff petition for the FY 2010-11. In view of the same, there was no approval of the ARR for FY 2009-10.

The BSEB submitted its ARR and tariff petition for FY 2010-11 before the Commission on 3<sup>rd</sup> February, 2010. The Commission passed the Tariff Order for FY 2010-11 on 6<sup>th</sup> December, 2010. The Commission also undertook the "Review" of ARR for FY 2008-09 along with the Tariff Order for FY 2010-11.

The BSEB submitted its ARR and tariff petition for FY 2011-12 before the Commission on 17<sup>th</sup> February, 2011. The Commission passed the Tariff Order for FY 2011-12 on 1<sup>st</sup> June, 2011, effective from 1<sup>st</sup> May 2011.

The True-up petition for FY 2006-07, FY 2007-08 and FY 2008-09, based on the audited annual accounts of BSEB, was filed by the BSEB on 01st September 2011. The addendum to this True-up petition was filed by BSEB on 17<sup>th</sup> October 2011. The Commission passed its first truing up order for FY 2006-07, FY 2007-08 and FY 2008-09 on 4<sup>th</sup> January 2012.



Subsequently, the BSEB filed the Truing up petition for FY 2009-10 on 13<sup>th</sup> October, 2011. The truing up order for FY 2009-10 was issued by the Commission on 27<sup>th</sup> January 2012.

BSEB also submitted a petition on 13<sup>th</sup> October, 2011 vide letter No. Com/ FPPCA-136/2011-1659 for the review of ARR for FY 2010-11 based on their Audited Annual Accounts. The Commission vide its Order dated 3<sup>rd</sup> November, 2011 directed BSEB to submit its petition for review of the expenses and revenues for the FY 2010-11 along with tariff petition for FY 2012-13. Commission also directed BSEB that, if the final audited accounts for the FY 2010-11 are made available to the Commission along with the petition or during the hearing of tariff petition for FY 2012-13, a final true up of the expenses and revenues for the FY 2010-11 shall be considered by the Commission.

The Board filed its ARR and tariff petition for FY 2012-13 on 15th November 2011. In this petition the Board also carried out review exercise for FY 2011-12 projecting the revised estimates for FY 2011-12 based on the provisional annual accounts of BSEB for FY 2010-11. A Supplementary petition for determination of ARR & retail tariff petition for FY 2012-13 was subsequently filed by the Board vide letter No. Com/ Tariff-152/ 2011-(Part-I) -017 on 2nd January 2012.

Further, BSEB vide letter no. Com/ Tar-132/ 2011-392 dated 2<sup>nd</sup> March, 2012 submitted the audited annual accounts for FY 2010-11 along with the audit certificate issued by CAG to the Commission. Subsequently, BSEB vide letter No. Com/ Tar-132/ 2011-451 dated 16<sup>th</sup> March, 2012 submitted the truing up petition of BSEB for FY 2010-11 based on the audited annual accounts for FY 2010-11.

The BSEB filed petition for truing up for FY 2010-11, Performance Review for FY 2011-12 and determination of ARR and Tariff for FY 2012-13. The Commission issued the Tariff Order on 30<sup>th</sup> March, 2012 effective from 1<sup>st</sup> April, 2012.

The BSPHCL filed the Petition on behalf of Generation, Transmission and Distribution Companies for provisional truing up of FY 2011-12 along with provisional Annual Accounts for FY 2011-12, Performance Review for FY 2012-13 and MYT Petition for determination of ARR for FY 2013-14 to FY 2015-16 and determination of tariff for FY 2013-14 on 14<sup>th</sup> November, 2012 vide their letter No. Com/Tariff petition- 160/2012/2857 dated 12.11.2012. Subsequently the Petitioner filed revised True up Petition for FY 2011-12 along with Audited Accounts on 24.12.2012. The Commission issued the Tariff Order on 15<sup>th</sup> march, 2013 effective from 1<sup>st</sup> April, 2013.

### **1.5 Admission of Current Petition and Public Hearing Process**

BSPTCL has filed the Petition for Annual Performance Review for FY 2013-14 and for Revised Annual Revenue Requirement and Determination of Transmission Charges for FY 2014-15.

On preliminary verification of the Petition, the Commission has admitted the Petition (Case No.22/2013) on 18<sup>th</sup> November, 2013 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 BSPHCL 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.

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

<b>Sl. No.</b>	<b>Name of the news paper</b>	<b>Language</b>	<b>Date of first Publication</b>	<b>Date of second Publication</b>
1	Times of India	English	6.12.2013	10.12.2013
2	Hindustan	Hindi	7.12.2013	11.12.2013

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 31<sup>st</sup> January, 2014.

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

The Commission received only two (2) written objections / suggestions from consumers / consumer organizations. The Commission directed Petitioners to submit the replies / response to the suggestions/ objections to the Commission vide letter No. as mentioned below:

<b>BERC Letter No.</b>	<b>Date</b>	<b>No. of objection/ suggestion sent to BSPTCL</b>	<b>Date of submission of reply by BSPTCL</b>
121	28/01/2014	1	14/02/2014
136	30/01/2014	1	

The public hearing was conducted as scheduled at Court Room of BERC Office on 10<sup>th</sup> January, 2014.

The names of consumers / consumer organizations who filed their objections and the list of objectors who participated in the public hearing for presenting their objections / suggestions are given in **Annexure-II**.

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.

The proposal of BSPTCL was also placed before the State Advisory Committee (SAC) in its meeting held on 23<sup>rd</sup> January 2014 and various aspects of the petition was 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**.

## **1.6 Approach of this order**

The BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007

provides for truing up of previous year (FY 2012-13). The truing up petition for FY 2012-13 has been filed by BSPHCL on behalf of four companies BSPGCL, BSPTCL, NBPDCCL and SBPDCL which has been registered as Case No. 21/2013 and is being processed separately.

The BSPTCL has now approached the Commission with the present Petition for Annual Performance Review for FY 2013-14 and Revised Annual Revenue Requirement for FY 2014-15 and Determination of Transmission Charges for FY 2014-15.

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 Petitioners to submit the additional data / information and clarifications vide letter No. 1561 dated 29.11.2013, No.8 dated 02.01.2014 and letter No.69 dated 11.01.2014 respectively. The Petitioners submitted additional information/data/clarifications vide their letter No. 3053 dated 19.12.2013, letter No. 88 dated 8.1.2014 and letter No. 328 dated 31.01.2014.

The Commission has considered the truing up exercise for FY 2012-13 of the erstwhile BSEB and its successor companies vide case No. 21/2013. So the Commission has undertaken the review for FY 2013-14 and for revision of Annual Revenue Requirement for FY 2014-15.

The Annual Performance Review for FY 2013-14 and Revised Annual Revenue Requirement for FY 2014-15 have been considered 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 Six (6) 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 the "Annual Performance Review" of ARR for FY 2013-14 filed by BSPTCL.
5. The **Fifth Chapter** deals with the determination of the revised ARR for FY 2014-15 and determination of Transmission Charges for FY 2014-15.
6. The **Sixth Chapter** deals with the Compliance of Directives.

## 2. Summary of the petition for Annual Performance Review for FY 2013-14 and Revised Annual Revenue Requirement for FY 2014-15 and Transmission Charges for FY 2014-15

### 2.1 Summary of the petition for Aggregate Revenue Requirement and Transmission Charges

The summary of Aggregate Revenue requirement (ARR) and Transmission Charges approved in MYT Order for FY 2013-14 and now claimed by BSPTCL in Review for FY 2013-14 (RE) and revised estimates for FY 2014-15 are as given in the Tables below:

**Table 2.1: ARR approved in Tariff Order for FY 2013-14 and now claimed in Review for FY 2013-14 (RE)**

(Rs. crore)			
Sl. No.	Particulars	FY 2013-14 (T.O)	FY 2013-14 (RE)
1	Depreciation	49.06	103.83
2	Interest & Finance Charges	33.03	24.53
3	Interest on Working Capital	8.60	22.56
4	O&M Expenses	89.56	222.86
a	Employee Expenses	75.27	91.29
b	R&M Expenses	9.31	115.10
c	A&G Expenses	4.98	10.99
d	Allocation of Holding Company Cost	-	5.49
5	Return on Equity	32.90	228.26
6	<b>Total Requirement</b>	<b>213.35</b>	<b>602.05</b>
7	Less: Non- Tariff Income	0.51	1.02
8	<b>Net ARR</b>	<b>212.84</b>	<b>601.03</b>

**Transmission charges approved for FY 2013-14 in Tariff Order dated 15<sup>th</sup> March, 2013 and now claimed in revised estimates for FY 2013-14**

(Rs. crore)			
Sl. No.	Particulars	FY 2013-14 (T.O)	FY 2013-14 (RE)
1	Annual Transmission charges	212.84	601.03
2	Transmission Cost to be realised per month from Distribution Companies	17.74	50.09

**Table 2.2: ARR approved in Tariff Order for FY 2014-15 in Tariff Order dated 15<sup>th</sup> March, 2013 and now claimed in Revised Proposal for FY 2014-15**

(Rs. crore)			
Sl. No.	Particulars	FY 2014-15 (T.O)	FY 2014-15 (Petition)
1	Depreciation	60.24	132.81
2	Interest & Finance Charges	52.11	37.19
3	Interest on Working Capital	10.63	25.44
4	O&M Expenses	107.05	247.12
a	Employee Expenses	91.66	101.18
b	R&M Expenses	10.03	125.58
c	A&G Expenses	5.36	14.37
d	Allocation of Holding Company Cost	-	6.00
5	Return on Equity	32.90	246.25
<b>6</b>	<b>Total Requirement</b>	<b>262.93</b>	<b>688.82</b>
7	Less: Non- Tariff Income	0.61	1.02
<b>8</b>	<b>Net ARR</b>	<b>262.32</b>	<b>687.79</b>

**Transmission charges approved for FY 2014-15 in Tariff Order dated 15<sup>th</sup> March, 2013 and now claimed in revised estimates for FY 2014-15**

(Rs. crore)			
Sl. No.	Particulars	FY 2014-15 (T.O)	FY 2014-15 (Petition)*
1	Annual Transmission charges	262.32	687.79
2	Transmission Cost to be realised per month from Distribution Companies	21.86	57.32

\* *Without adjustments of past revenue gap*

## 2.2 Request to the Commission

**BSPTCL has requested the Commission to:**

1. Admit the Petition;
2. Examine the proposal submitted by the Petitioner in the enclosed petition for a favourable dispensation;
3. Allow the Truing-up of Transmission function for FY 2012-13 filed separately by BSPHCL to be carried out on a consolidated basis and pass on the revenue gap/ (surplus) in the respective petitions of NBPDC and SBPDCL as per the agreed principles;
4. Pass suitable orders with respect to the APR for FY 2013-14 amounting Rs. 601.03 Crore and Revised ARR for FY 2014-15 amounting Rs. 687.79 Crore;

5. Approve the Transmission charges as per the proposal and considering 1<sup>st</sup> independent year of performance, allow relaxation in MYT norms wherever sought for;
6. Pass separate order for the Petitioner against the present petition.
7. BSPTCL may also be permitted 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.
8. 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.
9. Pass such Order, as the Commission may deem fit and appropriate keeping in view the facts and circumstances of the case.



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

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### **3.1 Introduction**

In response to the public notice inviting objections/suggestions of the stakeholders on the Tariff petition filed by BSPTCL, two (2) written objections have been filed by M/s Bihar Chamber of Commerce & Industries, Patna and M/s Kalyanpur Cements Ltd. Patna.

The public hearing, as scheduled was held in the Court Room, BERC office, Patna on 10<sup>th</sup> January, 2014 wherein the representatives of M/s Bihar Chamber of Commerce & Industries and M/s Kalyanpur Cements Limited have put forth their comments and suggestions before the Commission in the presence of the Petitioner.

The Commission has examined the issues and concerns voiced by the representatives of M/s Bihar Chamber of Commerce & Industries and M/s Kalyanpur Cements Limited 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 stakeholders 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: Assets and Liabilities vested in BSPTCL as on 01.04.2011 through transfer scheme -Revaluation of assets pending final transfer scheme notification by the Govt. of Bihar.**

According to clause-5.8 of the Transfer scheme, the transfer value of the assets already vested with the companies has to be revalued to conform with the financials and opening balance sheet as on the effective date of transfer which is 1<sup>st</sup>

November, 2012. The Tariff Petition reveals that the work relating to updation of transfer value was assigned by BSPTCL to M/s. PFC and the PFC has submitted a report for giving effect to finalization of the classifications of property, rights, assets, liabilities etc of all the four companies including BSPTCL and submitted to BSPHCL on 09.10.2013. The objector is not aware whether action as per Clause 5.8 of the Transfer Scheme by the Govt. of Bihar has been taken, or the draft proposal of M/s PFC consulting has been approved and is formally notified by the Govt. of Bihar. Unless the Govt. of Bihar notify the final transfer scheme, the land assets will be revalued on the basis of the Govt. values as on transfer scheme effective date. The Petitioner cannot claim to have revalued assets and liabilities on the basis of audited accounts of erstwhile BSEB as on the cut-off date 01.11.2012.

**Petitioner's submission:**

The revaluation report submitted by PFC has been considered for calculating GFA. However, the same is on provisional basis and is in the process of getting approval by the State Govt. in the Final Transfer Scheme.

**Commission's observations:**

The revaluation of Assets (land) has no bearing on the ARR computations, since the land value will not qualify for depreciation. Further, while arriving at the GFA, the Commission has not considered the revalued value of Land Asset. The asset value to the extent of value of revaluation is adjusted to arrive at the original/historical cost of assets.

**Issue 2: Revised ARR and Transmission charges**

The amount of ARR for FY 2013-14 (RE) and FY 2014 - 15 are abnormally increased to Rs. 601.03 Crore and Rs. 687.79 Crore respectively as against Rs. 212.84 crore and Rs. 262.32 Crore approved in the MYT order. Based on the revised ARR for FY 2013 – 14 (RE) and FY 2014-15, the transmission charges at Rs. 89.65 Crore per month are sought during FY 2014 – 15.

**Petitioner's submission:**

The Petitioner has submitted that the memo of objection is a matter of record.

**Commission's observation:**

The Commission has taken note of the concerns of the objectors. The Commission is of the view that the justifiable and legitimate cost should only be allowed to the Petitioner for its smooth and efficient functioning. The expenses for FY 2013 – 14 (RE) and for FY 2014 – 15 are approved as per Tariff Regulations, 2007 of the Commission and on prudence checks of all components of ARR.

**Issue 3: Depreciation**

The opening GFA for FY 2013 – 14 (RE) is projected at Rs. 3513.08 Crore as against Rs. 1547.13 Crore approved in MYT order dated 15.03.2013. Based on this the depreciation charges have been estimated at Rs. 103.83 Crore (FY 2013 -14) and Rs. 132.81 Crore (FY 2014 – 15 as against Rs. 49.26 Crore (FY 2013 – 14) and Rs. 60.24 Crore (FY 2014 – 15) approved in the MYT order.

Schedule 19 of the Board's accounts reveal that the Board has reclassified its "Land and Land Rights" which was only Rs. 33.48 crore as on 31-3-2012 to Rs. 4894.30 crore as on 31-10-2012 i.e. the cut-off date of unbundling of BSEB into various Companies.

The assets relating to land & building are not to be reckoned in calculation of depreciation charge. But the petitioner, without any basis has claimed depreciation charges on the total GFA which must be rejected and no increase in depreciation allowed.

**Petitioner's submission:**

During the process of restructuring, the assets are revalued and the Petitioner has requested the Commission in its Petition to consider the same figures for ARR purpose. The revaluation report of PFC has been submitted in the Petition based on which GFA has been considered. Transfer scheme finalization is under process and Final Transfer Scheme is yet to be notified by the State Government.

The Company would like to refer to PART XIII, REORGANISATION OF BOARD and Section 131 thereof from the Electricity Act 2003. The relevant section is extracted

for reference purpose which provides that any transaction pursuant to transfer scheme shall be binding on all persons.

*131 (3) Notwithstanding anything contained in this section, where, - (b) a transaction of any description is effected in pursuance of a transfer scheme, it shall be binding on all persons including third parties and even if such persons or third parties have not consented to it.*

Further it is submitted that only land is re-valued and no other assets are re-valued in transfer scheme. The computation of depreciation by Petitioner is done by using weighted average method and has assumed 5.22% as approved in MYT order for review and projection purposes.

**Commission's Observation:**

The Commission has examined the objection raised and reply of the Petitioner. Land is not a depreciable asset and its cost shall be excluded from the capital cost while computing the depreciation as per BERC Tariff Regulations 2007. The Land value to the extent of revaluation as projected in the petition is not considered by the Commission while determining the Gross Fixed Assets (GFA) for FY 2013 - 14 (RE) and FY 2014 - 15.

**Issue 4: Repair and Maintenance Expenses**

While approving the R&M expenses for the control period in the MYT order dated 15-03-2014, the Commission has considered the increase in WPI as on 31<sup>st</sup> March 2012 as 7.69% and accordingly, approved R&M expenses at an increase of 7.69% per annum on the actual expenses of FY 2011 – 12, as against 9.25% year to year increase projected by the Petitioner. But, the Petitioner has again raised this issue and claimed inflation rate at 9.21%. Further, the GFA for computation of R&M expenses is highly inflated which may be due to so called "revaluation" of land and land rights. Hence, no increase in R&M expenses may be allowed.

**Petitioner's submission:**

Post unbundling, BSPTCL has initiated major drive for maintenance and upkeeping of its transmission assets to maintain efficiency. Further the Company is also

undertaking huge capital expenditure schemes for efficient transmission system to the tune of Rs. 3500 crore and hence R&M expenses are bound to increase. The methodology adopted by the Commission to approve expenses based on past trend and with inflation would deprive Petitioner of its legitimate claim of R&M expenses on the assets added during the year. Hence, R&M expenses are provided as a percentage of Gross Fixed Assets as the licensee needs to eventually maintain assets and generally inflation over previous year expenditure is insufficient as it ignores R&M cost towards additions of new assets.

**Commission's Observation:**

The Commission has noted the objection and the reply of the Petitioner. The Repairs and Maintenance expenses reported in the audited annual accounts for FY 2012-13 (November'12 to March'13) of BSPTCL (pro-rata projected per year) for FY 2012-13 is considered by the Commission as base value. The base value is increased for inflationary (WPI) increase for FY 2013-14 and 2014-15 and accordingly, the Commission has considered the Repairs and Maintenance expenses.

**Issue 5: Employee Cost**

The Employee cost for FY 2013-14 (RE) and for FY 2014-15 are projected in the petition at Rs. 91.29 Crore and Rs. 101.18 Crore respectively as against Rs. 75.27 Crore (FY 2013-14) and Rs. 91.66 Crore (FY 2014 - 15) approved in the MYT order. The Petitioner in its petition stated that the provisions under this head are to be revised on the basis of Budget Estimates of the Company for FY 2013-14 (RE) and FY 2014-15. The actual expenditure for the period November 2012 to March 2013 was only Rs. 33.93 Crore and no pre-actuals of employee cost for the current year (FY 2013-14) have been disclosed. Hence, it is not desirable to enhance the employee cost as projected by the Petitioner.

**Petitioner's submission:**

The employee cost may be approved based on the Budget Estimate and Revised Estimate submitted in the petition. The details of independent operations as well as

of BSEB period are provided in Annual Accounts for FY 2012–13 of respective Companies. The function wise break-up of expenses for the period April to October 2012 is provided in statement – 6 of Annual Accounts of BSEB.

**Commission’s Observation:**

The Commission has considered the employees cost reported in the audited annual accounts for FY 2012-13 (November’12 to March’13) of BSPTCL (pro-rata projected per year) for FY 2012-13 as base value. The base value is increased for inflationary (CPI) increase for FY 2013-14 and 2014-15 and accordingly, the Commission has considered the employee cost.

**Issue 6: Administration and General Expenses**

There is abnormal increase in the A&G expenses for both FY 2013-14 (RE) and FY 2014-15. In support of unrealistic demand under this head, the Petitioner has failed to prefer any reasonable and logical grounds. It is stated that the A&G expenses for the two years were projected on the Revised Estimate for FY 2013-14 and Budget estimate for FY 2014 - 15 and neither the actual expenditure of the full FY 2012-13 has been given nor any pre-actuals of current FY 2013 - 14 are produced in support of the claims. Further the A&G expenses projected includes Rs. 2.15 Crore towards ‘Technical Fees’, the details of which are not furnished. In any case, such a huge amount should have been capitalized as technical fees might have been utilized in creation, installation and commissioning of new schemes of the company. The A&G expenses approved by the Commission would be more than suffice and there is no reason whatsoever to consider increasing the provisions now.

**Petitioner’s submission:**

The Revised Estimate for FY 2013-14 and Budget estimate of FY 2014-15 for the purpose of projecting revised A&G expenses has been used. The A&G expenses has witnessed an increase during FY 2013-14, due to heavy increase on account of electricity bill of 86 numbers of Grid Substations, now being separately billed by DISCOMs on monthly basis. Further, an amount of about Rs. 1.05 Crore is paid on

account of insurance of transmission costs. Since the A&G expenses are claimed based on the budget estimates they need to be approved.

**Commission's Observation:**

The Commission has considered the Administration & General expenses reported in the audited annual accounts for FY 2012-13 (November'12 to March'13) of BSPTCL (pro-rata projected per year) for FY 2012-13 as base value. The base value is increased for inflationary (CPI) increase for FY 2013-14 and 2014-15 and accordingly, the Commission has considered the Administration and General expenses.

**Issue 7: Interest on Working Capital**

The Interest on working capital is projected at Rs. 22.56 Crore (FY 2013-14 (RE)) and at Rs. 25.44 Crore (FY 2014 – 15) as against Rs. 8.60 crore (FY 2013-14) and Rs. 10.63 Crore approved in MYT order. The element 'maintenance spares' has to be determined on the basis of one percent of GFA. The GFA assumed for FY 2013-14 and FY 2014-15 are not correct and need correction, as 90% of GFA assumed is attributable to revalued assets relating to land and rights.

**Petitioner's submission:**

The interest on working capital is based on O&M expenses projected and the same would be considered as approved by the Commission. The maintenance spares considered for calculating working capital is the works that need to be carried out for maintaining the fixed asset of the Company. BERC Tariff Regulations, 2007 allows maintenance spares to the extent of 1% of GFA and accordingly has been considered for calculation.

**Commission's Observation:**

Interest on working capital is considered based on the approved components of ARR for FY 2013 – 14 (RE) and FY 2014-15 on normative principles as per the BERC Tariff Regulation, 2007.

**Issue 8: Return on Equity**

The return on equity claimed is abnormally high. Against Rs. 32.90 Crore for FY 2013-14 and Rs. 32.90 for FY 2014-15 approved in MYT order, Rs. 228.26 Crore for FY 2013-14 (RE) and Rs. 246.25 Crore for FY 2014-15 are claimed. The claims are based on the report of M/s PFC to BSPHCL where in the equity capital of the four unbundled companies of erstwhile BSEB is expected to have a total equity of Rs. 69.65 Crore after the State Govt approves the proposal. No claims could be accepted on the basis of anticipation / expectation of getting higher equity capital on a future date and hence the RoE claimed by the Petitioner may not be accepted.

**Petitioner's submission:**

The computation of equity is considering as per the closing equity balance in true up petition for FY 2012-13. During the process of restructuring the equity component has got revalued. The equity capital is excluding revaluation of reserves and subsidies and is claimed as per Regulation 72 (2) (c) of BERC Tariff Regulations, 2007. The computation of the equity is considered as per the closing equity balance in the true-up petition of FY 2012-13. During the process of restructuring, the equity component has got revalued. The equity capital is excluding revaluation of reserves and subsidies and is claimed as per Regulation 72 (2) (c) of BERC Tariff Regulations 2007. Part XIII REORGANISATION OF BOARD AND SECTION 131 (3) thereof from the Electricity Act, 2003 specifies that "Notwithstanding anything contained in this section, where-(b) A transaction of any description is effected in pursuance of a transfer scheme, it shall be binding on all persons including third parties and even if such persons or third parties have not consented to it." The revaluation report submitted by PFC has been considered for calculating various expenses such as depreciation, RoE etc; however, the same is on provisional basis and subject to approval by the State Govt. in the final Transfer Scheme.

**Commission's Observation:**

The Commission has not considered the revalued value of Land Asset as projected in the petition. The Commission has made its own jurisprudence and considered the equity and allowed return on equity.



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## 4. Performance Review of FY 2013-14

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### 4.1 Background

The Commission issued the Tariff Order for FY 2013-14, determining the Multi Year Aggregate Revenue Requirement (ARR) for FY 2013-14 to FY 2015-16 separately for Bihar State Power Generating Company Limited (BSPGCL), Bihar State Power Transmission Company Limited (BSPTCL), combined for North Bihar Power Distribution Company Limited (NBPDC) and South Bihar Power Distribution Company Limited (SBPDCL) and Retail Supply Tariff for FY 2013-14 on 15<sup>th</sup> March, 2013. The approval was based on the estimates presented by the Bihar State Power (Holding) Company Limited (BSPHCL) on behalf of unbundled entities for costs to be incurred and revenue likely to be generated during the year after prudence check.

BSPTCL has submitted the present petition separately for first time after unbundling of BSEB. BSPTCL has submitted that it is yet to complete 12 months of independent operations after coming into existence. BSPTCL requested the Commission for review of ARR for FY 2013-14 and to re-determine the ARR for FY 2014-15 based on actual audited accounts and considering the gap/ (surplus) accordingly. BSPTCL further submitted that it would be prudent that the Commission determines norms for the Petitioner for the control period of 3 years starting from FY 2016-17 to FY 2018-19 based on the earning's and its independent operations till year 2015/2016. The next control period of 3 years starting from FY 2016-17 to FY 2018-19 would also ensure that it is in line with the CERC Tariff Regulations for next control period FY 2016-17 to FY 2018-19.

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 review/revise its ARR for FY 2013-14 and FY 2014-15 so as to enable sound transition of new companies and also avoiding financial loss to the Petitioner in transition phase.

BSPTCL has submitted that the revised ARR for FY 2015-16 would be filed in next year petition along with annual performance review of FY 2014-15, as BSPTCL believes the capital expenditure planning and operational performance would have settled by that time.

BSPTCL has now filed its Annual Performance Review for FY 2013-14 and Revised Annual Revenue Requirement for FY 2014-15 for consideration of the Commission.

BSPTCL has stated that this petition contains the actual data for FY 2013-14 for certain period and revised estimates for FY 2014-15 for capital expenditure schemes based on approved/sanctioned schemes.

The Commission has analyzed the components of expenditure claimed in the review by BSPTCL for FY 2013-14 in this chapter.

#### **4.2 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 August'13) is as given below:

<b>Voltage</b>	<b>No. of Substations</b>	<b>Line length (CKM)</b>	<b>Transformation Capacity (MVA)</b>
400 KV	-	75	-
220 / 132 / 33 KV	10	1435	-
220 / 132 KV	1	-	3550
132 / 33 KV	75	5819	4952
132 / 25 KV	-	-	110
<b>Total</b>	<b>86</b>	<b>7329</b>	<b>8612</b>

### 4.3 Performance of the Transmission System

#### Petitioner's submission

BSPTCL has submitted that the transmission loss trajectory considered by the Commission in MYT order as provided in the Table below:

**Table 4.1: Transmission Loss approved in MYT order**

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

The Petitioner has submitted that the transmission loss projected was on provisional basis as independent operations of the transmission company having started only w.e.f. 1<sup>st</sup> November 2012.

The Petitioner submitted comparison of transmission losses of other states which are in operation over last 5-7 years as independent companies as below.

State	FY 2012-13	FY 2013-14	FY 2014-15
Gujarat	4.15%	4.10%	4.10%
Uttar Pradesh	3.67%		
Maharashtra	4.85%	4.85%	
Karnataka		4.04%	4.02%
Madhya Pradesh	3.16%		
Rajasthan	4.20%		
Jharkhand	5.00%		
Andhra Pradesh		4.02%	

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

BSPTCL has submitted that substantial investments are being made on strengthening of 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 centers, which results in reduction of transmission losses, distribution losses, improvement of system reliability and

creation of robust transmission network. The results of improvement works would reflect only after 1-2 years after the Commissioning of these transmission assets.

BSPTCL has further submitted that the computation of transmission loss should be based on the energy input into the BSPTCL grid and energy output as measured at interface points of DISCOMs. The Petitioner requested to approve transmission losses for this control period on actual basis and submitted the revised transmission loss trajectory for consideration as furnished in the Table below:

**Table 4.2: Revised Transmission Loss Trajectory Projected by the Petitioner**

Particulars	FY 2013-14	FY 2014-15	FY 2015-16
Approved % Transmission Loss	4.02%	3.97%	3.92%
Revised Trajectory of Transmission loss	4.05%	4.05%	4.05%

BSPTCL has requested the Commission to approve the revised transmission loss trajectory for FY 2013-14 and FY 2014-15.

**Commission's analysis:**

The Commission has examined the issue and considered the transmission loss trajectory at the approved levels only as per Tariff Order for FY 2013-14. However, the BSPTCL is directed to submit the actual loss level by considering the input energy in to the transmission system and energy delivered to DISCOMs during FY 2013-14 to consider any revision in transmission loss during FY 2013-14 and trajectory for FY 2014-15 onward.

**4.4 Capital Investment Plan**

**Petitioner's submission:**

BSPTCL has submitted that the capital Investment plan submitted to the Commission in the MYT petition was approved by the Commission in the Tariff Order dated 15<sup>th</sup> March 2013 as detailed in the Table below:

Table 4.3: Capital Investment

								(Rs. Crore)
Sl. No.	Particulars	Total Cost	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total MYT	Remaining (2016-17)
1	12 <sup>th</sup> Plan-18 <sup>th</sup> EPS (BRGF)	6338	437	210	844	1960	3450	2888
2	Immediate removal of transmission constraints	310	201	109			310	
3	ADB funded schemes	197	197				197	
4	Grand Total	6845	835	319	844	1960	3957	2888

Table 4.4: Capex and Capitalisation approved for FY 2012-13 to FY 2015-16

							(Rs. Crore)
Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Balance	
1	Total investment	835	319	844	1960		
2	Capitalisation of CWIP Rs.139 crore	42	42	42			
3	New Investment	250	346	684	968		
	FY 2012-13 - Rs.835 crore	250	250	335			
	FY 2013-14 - Rs.319 crore		96	96	127		
	FY 2014-15 - Rs.844 crore			253	253	338	
	FY 2015-16 - Rs.1960 crore				588	1372	
4	<b>Total (2+3)</b>	<b>292</b>	<b>388</b>	<b>726</b>	<b>968</b>	<b>1710</b>	

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 12<sup>th</sup> 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 submitted that the capital expenditure envisaged to be under taken from FY 2015-16 onward years covered under Phase-IV Transmission planning (Rs. 3000 crore) would be undertaken by Bihar Grid Company Limited (BGCL) a joint venture company with 50 : 50 equity from PGCIL and BSPHCL incorporated under the companies act on 04-01-2013. It is submitted that the Commission has granted license for 25 years to implement the transmission projects for 12<sup>th</sup> Five year Plan in a phased manner on Build, Own, operate and maintain basis in the State of Bihar.

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 MYT petition 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. 3596.74 crore from FY 2012-13 to FY 2015-16 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:

Table 4.5: 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 <sup>th</sup> 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	<b>Total</b>	<b>3596.74</b>	<b>127.64</b>	<b>660.39</b>	<b>1879.01</b>	<b>929.70</b>	<b>3596.74</b>

The details of the schemes are given below:

**(a) 12<sup>th</sup> Plan Transmission and Sub-transmission system strengthening in Bihar**

**Phase-III – Rs.1958.50 crore**

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

Sl. No.	Particulars	Unit	Amount (Rs. Crore)
1	220 / 132 /33 KV substations (incl. extension)	11 Nos.	273.51
2	132 / 33 KV substations (incl. extension)	38 Nos.	230.26
3	220 KV Line	480 CKM	280.14
4	132 KV line	661 CKM	174.81
5	Land acquisition for substation and R&R compensation		62.15
6	Crop, tree, forest compensation and others		66.43
7	Data & voice connectivity		12.78
8	Sonenagar 220 kV GSS and associated lines		108.00
9	R&M of old operating 132/33 KV GSS	20 Nos.	99.96
10	Contingencies and other misc. works		33.84
11	Civil works for Substations		17.05
12	Survey, non-residential buildings, etc.		11.10
13	Other planned additional works		588.47
<b>14</b>	<b>Total</b>		<b>1958.50</b>

**(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
<b>10</b>	<b>Total</b>		<b>472.53</b>



**(c) ADB funded Schemes – Rs.296.90 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	Other works		100.00
<b>11</b>	<b>Total</b>		<b>296.90</b>

**(d) State Plan Schemes – Rs.502.33 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	99.65
2	132/33 KV GSS at Jandaha,	25.00
3	132/33 KV GSS at Tehta	51.20
4	132/33 KV GSS at Ekma (Saran)	5.10
5	132/33 KV GSS (4x50 MVA) at Kabrigahiya along with 33/11 KV SS (2x10 MVA) at Kabrigahiya	77.36
6	132/33 KV GSS at Sherghati and 132 KV Bodhgaya – Sherghati line	25.10
7	Construction of transmission facilities to evacuate power	26.12
8	Erection of various transmission lines	7.86
9	Construction of 5 Nos additional 132/33 KV bays and 5 Nos. 33 KV bays at Sitamarhi, Bihta, Khagaul, Ara and Nawada	8.70
10	Purchase of 3 Nos. 50 MVA 132/33 KV transformers for Siwan, Nawada and Jamalpur GSS	7.92
11	Renovation of old GSS	8.88
12	Purchase of transformers (150/100/50 MVA)	49.04
13	Construction of control room building, residential complex and building, boundary wall, internal road, etc. at old GSS	76.83
14	Construction of park and beautification of Kabigahia Thermal Power Complex	27.31
15	Testing equipment for testing of GSS equipments	6.26
<b>16</b>	<b>Total</b>	<b>502.33</b>

**(e) Installation of Grid Sub Stations through State Plan funding – Rs.350 crore**

BSPTCL has planned installation of 14 Nos. of Grid Sub Stations in the areas where there is need for augmentation of the transmission capacity. However, the BSPTCL has not furnished the details of GSS and the level of voltages.

**(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 fully equipped 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.13.48 crore**

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

Sl. No.	Particulars	Contract amount for project	Expected Phasing of Expenditure	
			FY 2013-14	FY 2014-15
1	ULDC up-gradation	5.98	3.59	2.39
2	Other miscellaneous works – Renovation of 4 <sup>th</sup> floor, BSPTCL office	2.50	1.00	1.50
3	Office furniture, computers, vehicles, etc.	5.00	1.00	4.00
4	<b>Total</b>	<b>13.48</b>	<b>5.59</b>	<b>7.89</b>

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.

BSPTCL has requested the Commission to approve the total capital expenditure plan proposed for FY 2013-14 and for FY 2014-15.

**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 (g)} at a total cost of Rs. 3596.74 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 4.6: Capital Investment considered by the Commission****(Rs. Crore)**

Sl. No.	Particulars	Total Cost	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total
1	12 <sup>th</sup> 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	<b>Total</b>	<b>3596.74</b>	<b>127.64</b>	<b>660.39</b>	<b>1879.01</b>	<b>929.70</b>	<b>3596.74</b>

#### 4.5 Capitalisation

##### Petitioner's submission:

BSPTCL has submitted that it has adopted the approach of the Commission from the MYT order and considered capitalisation of investment from the schemes - opening capital works in progress, the new schemes under BRGF, ADB and others which are classified as New Schemes and R&M schemes. BSPTCL has furnished the capitalisation schedule and year-wise capitalisation of investment in the following Tables:

**Table 4.7: Assumptions for Capitalisation**

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

**Table 4.8: Year-wise Capitalisation proposed by the Petitioner**

(Rs. crore)

Sl. No.	Particulars	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	Total
1	Total investment	660.39	1879.02	929.70			<b>3469.10</b>
2	Opening CWIP	113.68	113.68	151.57			<b>378.94</b>
3	<b>Capitalisation of New Investment</b>	<b>197.44</b>	<b>770.26</b>	<b>1102.17</b>	<b>1027.36</b>	<b>371.88</b>	<b>3469.11</b>
	From Capex of FY 2013-14	197.44	201.03	261.92			<b>660.39</b>
	From Capex of FY 2014-15		569.23	561.34	748.45		<b>1879.02</b>
	From Capex of FY 2015-16			278.91	278.91	371.88	<b>929.70</b>
4	<b>Investment capitalised (2+3)</b>	<b>311.12</b>	<b>883.94</b>	<b>1253.74</b>	<b>1027.36</b>	<b>371.88</b>	<b>3848.04</b>

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 capital investment of Rs. 3469.10 crore for FY 2013-14 to FY 2015-16 as indicated in the table 4.10 below:

The Commission has considered the assumptions of the Petitioner for capitalisation of investment, which is as per the capitalisation schedule approved by the Commission in MYT period in Tariff Order for FY 2013-14. The capitalisation schedule and the capital expenditure capitalised / transferred to fixed assets i.e. GFA based on the capital investment approved by the Commission are furnished in the Tables below:

**Table 4.9: Capitalisation schedule approved by the Commission**

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

**Table 4.10: Capitalisation of capital expenditure approved by the Commission for FY 2013-14 to FY 2015-16 (MYT period) including opening CWIP**

(Rs. Crore)

Sl. No.	Particulars	MYT Period			FY 2016-17	FY 2017-18	Total
		FY 2013-14	FY 2014-15	FY 2015-16			
1	Total investment	660.39	1879.01	929.70			<b>3469.10</b>
2	Opening CWIP	113.68	113.68	151.58			<b>378.94</b>
3	<b>Capitalisation of New Investment</b>	<b>198.12</b>	<b>761.82</b>	<b>1106.77</b>	<b>1030.51</b>	<b>371.88</b>	<b>3469.10</b>
	From Capex of FY 2013-14	198.12	198.12	264.16			<b>660.39</b>
	From Capex of FY 2014-15		563.70	563.70	751.60		<b>1879.01</b>
	From Capex of FY 2015-16			278.91	278.91	371.88	<b>929.70</b>
4	<b>Total Investment capitalised (2+3)</b>	<b>311.80</b>	<b>875.50</b>	<b>1258.35</b>	<b>1030.51</b>	<b>371.88</b>	<b>3848.04</b>

#### 4.6 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, 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 capital expenditure and capitalisation in the Table below:

**Table 4.11: Scheme wise funding for capital expenditure projected by the Petitioner:**  
(Rs. Crore)

Sl. No.	Planned Scheme	Ratio	Capital Expenditure	FY 2013-14	FY 2014-15	FY 2015-16
<b>1</b>	<b>12th Plan Transmission &amp; Sub-Transmission System Strengthening in Bihar - Phase-III</b>		<b>1958.50</b>	<b>300.00</b>	<b>1000.00</b>	<b>658.50</b>
	Equity	100%	1958.50	300.00	1000.00	658.50
	Grant					
<b>2</b>	<b>Strengthening of Sub-Transmission System in Bihar - Extension scheme Phase-II works (Revised)</b>		<b>472.53</b>	<b>125.00</b>	<b>347.53</b>	
	Equity	100%	472.53	125.00	347.53	
	Grant					
<b>3</b>	<b>ADB Funded Scheme</b>		<b>296.90</b>	<b>89.86</b>	<b>128.52</b>	<b>60.00</b>
	Equity					
	Loans	100%	296.90	89.86	128.52	60.00
<b>4</b>	<b>State Plan Scheme</b>		<b>502.33</b>	<b>139.64</b>	<b>253.57</b>	
	Grant					
	Loans	100%	502.33	139.64	253.57	
<b>5</b>	<b>Installation of 14 Nos of GSS (funding through State Plan)</b>		<b>350.00</b>		<b>140.00</b>	<b>210.00</b>
	Equity					
	Loans	100%			140.00	210.00
<b>6</b>	<b>Establishment of BSPTCL's Training Centre (funding through State Plan)</b>		<b>3.00</b>	<b>0.30</b>	<b>1.50</b>	<b>1.20</b>

	Equity					
	Loans	100%		0.30	1.50	1.20
<b>7</b>	<b>Capital Expenditure Schemes through Internal Resources</b>		<b>13.48</b>	<b>5.59</b>	<b>7.89</b>	
	Equity	100%		5.59	7.89	
	Loans					
<b>8</b>	<b>Opening CWIP</b>		<b>378.94</b>			
	Grants	40%				
	Loans	60%				
<b>9</b>	<b>Grand Total</b>		<b>3469.10</b>	<b>660.39</b>	<b>1879.01</b>	<b>929.70</b>
	<b>Grants</b>					
	<b>Equity</b>		<b>2444.51</b>	<b>430.59</b>	<b>1355.42</b>	<b>658.50</b>
	<b>Loans</b>		<b>1024.59</b>	<b>229.80</b>	<b>523.59</b>	<b>271.20</b>

Table 4.12: Scheme wise funding for Capitalisation proposed by the Petitioner:

(Rs. crore)

Sl. No.	Planned Scheme	Ratio	Capital Expenditure	FY 2013-14	FY 2014-15	FY 2015-16
<b>1</b>	<b>12th Plan Transmission &amp; Sub-Transmission System Strengthening in Bihar - Phase-III</b>		<b>1097.55</b>	<b>90.00</b>	<b>390.00</b>	<b>617.55</b>
	Equity	100%	1097.55	90.00	390.00	617.55
	Grant					
<b>2</b>	<b>Strengthening of Sub-Transmission System in Bihar - Extension scheme Phase-II works (Revised)</b>		<b>333.52</b>	<b>37.50</b>	<b>141.76</b>	<b>154.26</b>
	Equity	100%	333.52	37.50	141.76	154.26
	Grant					
<b>3</b>	<b>ADB Funded Scheme</b>		<b>184.97</b>	<b>26.96</b>	<b>65.51</b>	<b>92.50</b>
	Equity					
	Grant					
	Loans	100%	184.97	26.96	65.51	92.50
<b>4</b>	<b>State Plan Scheme</b>		<b>291.78</b>	<b>41.89</b>	<b>117.96</b>	<b>131.93</b>
	Equity					
	Grant					
	Loans	100%	291.78	41.89	117.96	131.93
<b>5</b>	<b>Installation of 14 Nos of GSS (funding through State Plan)</b>		<b>147.00</b>		<b>42.00</b>	<b>105.00</b>
	Equity					
	Grant					
	Loans	100%	147.00		42.00	105.00
<b>6</b>	<b>Establishment of BSPTCL's Training Centre (funding</b>		<b>1.53</b>	<b>0.09</b>	<b>0.54</b>	<b>0.90</b>

	through State Plan)					
	Equity					
	Grant					
	Loans	100%	1.53	0.09	0.54	0.90
<b>7</b>	<b>Capital Expenditure Schemes through Internal Resources</b>		<b>13.48</b>	<b>1.00</b>	<b>12.48</b>	
	Equity	100%	13.48	1.00	12.48	
	Grant					
	Loans					
<b>8</b>	<b>Opening CWIP</b>		<b>378.94</b>	<b>113.68</b>	<b>113.68</b>	<b>151.58</b>
	Equity					
	Grant	40%	151.58	45.47	45.47	60.63
	Loans	60%	227.36	68.21	68.21	90.94
<b>9</b>	<b>Grand Total</b>		<b>2448.77</b>	<b>311.12</b>	<b>883.94</b>	<b>1253.71</b>
	<b>Equity</b>		<b>1444.55</b>	<b>128.50</b>	<b>544.24</b>	<b>771.81</b>
	<b>Grant</b>		<b>151.58</b>	<b>45.47</b>	<b>45.47</b>	<b>60.63</b>
	<b>Loans</b>		<b>852.64</b>	<b>137.15</b>	<b>294.23</b>	<b>421.27</b>

### 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 Petitioner has projected the 12<sup>th</sup> plan transmission and sub-transmission system strengthening scheme - Phase-III works expenditure funding through "Equity". These schemes are funded by the Government of India channeled through Government of Bihar. As could be seen from the Government of Bihar Rajyadesh No. 5150 dt.7-11-2013, these schemes {Backward Regions Grant Fund (BRGF) (Special Plan)} are funded by the Government of India and funds received shall be utilized/expended as per the guidelines of the scheme approvals. 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 name of the scheme itself suggests through Grant funds from Central/State Government. Accordingly, the Commission considers the 12<sup>th</sup> plan transmission and sub-transmission system strengthening scheme – Phase-III expenditure as "Grant" only.



Further, Strengthening of Sub-Transmission System in Bihar – Extension Scheme of Phase-2 works was also projected as through “Equity”. Normally as per the accounting principles, the equity should be infused in to the business in Cash without any condition attached to it for utilization of equity. The Commission has opined that these works are being executed by PGCIL on behalf of BSPTCL. BSPTCL is making adjustments in the books of accounts on handing over of assets by PGCIL. The value of assets received/recorded in the books of accounts shall be treated as “Grants” only. The Commission, accordingly, considers the funding of this scheme as “Grants”.

Internal resources represent Retained Surplus/Profits earned by the Company allowed through Tariff Orders by the Commission year on year, which are realized through tariffs from the consumers. These retained surplus/profit forms part of Reserves. As such, the Commission has not considered the capital expenditure schemes/investment proposed through internal resources as “Equity”.

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

**Table 4.13: Scheme wise funding of capital expenditure considered by the Commission**  
(Rs. crore)

Sl. No.	Planned Scheme	Ratio	Capital Expenditure	FY 2013-14	FY 2014-15	FY 2015-16
1	12th Plan Transmission & Sub-Transmission System Strengthening in Bihar - Phase-III		1958.50	300.00	1000.00	658.50
	Grant	100%	1958.50	300.00	1000.00	658.50
2	Strengthening of Sub-Transmission System in Bihar - Extension scheme Phase-II works (Revised)		472.53	125.00	347.53	
	Grant	100%	472.53	125.00	347.53	
3	ADB Funded Scheme		296.90	89.86	128.52	60.00
	Loan	100%	296.90	89.86	128.52	60.00
4	State Plan Scheme		502.33	139.64	253.57	
	Loan	100%	502.33	139.64	253.57	
5	Installation of 14 Nos. of GSS (funding through State Plan)		350.00		140.00	210.00
	Loan	100%	350.00		140.00	210.00

6	Establishment of BSPTCL's Training Centre (funding through State Plan)		3.00	0.30	1.50	1.20
	Loan	100%	3.00	0.30	1.50	1.20
7	Capital Expenditure Schemes through Retained surplus/Internal Resources		13.48	5.59	7.89	
8	<b>Grand Total</b>		<b>3596.74</b>	<b>660.39</b>	<b>1879.01</b>	<b>929.70</b>
	<b>Equity</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	<b>Grant</b>		<b>2431.03</b>	<b>425.00</b>	<b>1347.53</b>	<b>658.50</b>
	<b>Loan</b>		<b>1152.23</b>	<b>229.80</b>	<b>523.59</b>	<b>271.20</b>
	<b>Retained surplus/ internal resources</b>		<b>13.48</b>	<b>5.59</b>	<b>7.89</b>	<b>0.00</b>

Table 4.14: Scheme wise funding of Capitalisation considered by the Commission

(Rs. crore)

Sl. No.	Planned Scheme	Ratio	Capital Expenditure	FY 2013-14	FY 2014-15	FY 2015-16
1	12th Plan Transmission & Sub-Transmission System Strengthening in Bihar - Phase-III		1097.55	90.00	390.00	617.55
	Grant	100%	1097.55	90.00	390.00	617.55
2	Strengthening of Sub-Transmission System in Bihar - Extension scheme Phase-II works (Revised)		333.52	37.50	141.76	154.26
	Grant	100%	333.52	37.50	141.76	154.26
3	ADB Funded Scheme		184.97	26.96	65.51	92.50
	Loans	100%	184.97	26.96	65.51	92.50
4	State Plan Scheme		291.78	41.89	117.96	131.93
	Loans	100%	291.78	41.89	117.96	131.93
5	Installation of 14 Nos. of GSS (funding through State Plan)		147.00		42.00	105.00
	Loans	100%	147.00		42.00	105.00
6	Establishment of BSPTCL's Training Centre (funding through State Plan)		1.53	0.09	0.54	0.90
	Loans	100%	1.53	0.09	0.54	0.90
7	Capital Expenditure Schemes through Retained surplus/Internal Resources		13.48	1.68	4.05	7.75
8	Opening CWIP		378.94	113.68	113.68	151.58
	Equity					
	Grant	40%	151.58	45.47	45.47	60.63

	Loans	60%	227.36	68.21	68.21	90.95
<b>9</b>	<b>Grand Total</b>		<b>2448.77</b>	<b>311.80</b>	<b>875.50</b>	<b>1261.47</b>
	<b>Equity</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	<b>Grant</b>		<b>1582.65</b>	<b>172.97</b>	<b>577.23</b>	<b>832.44</b>
	<b>Loans</b>		<b>852.64</b>	<b>137.15</b>	<b>294.22</b>	<b>421.28</b>
	<b>Retained Surplus / Internal Resources</b>		<b>13.48</b>	<b>1.68</b>	<b>4.05</b>	<b>7.75</b>

#### 4.7 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 4.15: Projected IDC for FY 2013-14**

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	Loan drawal	177.00	137.15
2	Average Loan	88.50	68.58
3	Interest Rate	13.00%	13.00%
<b>4</b>	<b>IDC (on average loan)</b>	<b>11.51</b>	<b>8.91</b>

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 4.16: Approved IDC for FY 2013-14

				(Rs. crore)
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	Loan drawal	177.00	137.15	137.15
2	Average Loan	88.50	68.58	68.58
3	Interest Rate	13.00%	13.00%	13.00%
4	<b>IDC (on average loan)</b>	<b>11.51</b>	<b>8.91</b>	<b>8.91</b>

The Commission approved IDC for FY 2013-14 (RE) as detailed in the Table above.

#### 4.8 Gross Fixed Assets

##### **Petitioner's submission:**

BSPTCL has submitted that it has considered the opening GFA as per provisional balance sheet as on 31<sup>st</sup> March 2013. Further, it is submitted that during the process of restructuring, the assets are re-valued and requested the Commission to consider the same for ARR purpose.

BSPTCL has submitted that Section 131 of the Electricity Act, 2003 provides that any transaction pursuant to transfer scheme shall be binding on all persons. Section 131 of the Electricity Act, 2003 is reproduced hereunder

***Notwithstanding anything contained in this section, where; (b) a transaction of any description is effected in pursuance of a transfer scheme, it shall be binding on all persons including third parties and even if such persons or third parties have not consented to it.***

BSPTCL has submitted the computation of Gross Fixed Assets based on the capitalisation schedule for FY 2013-14 as per Table below:

Table 4.17: Gross Fixed Assets projected for FY 2013-14

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	Opening GFA	1547.13	3513.08
2	Additions during the year	388.00	311.12
3	Interest During Construction	11.51	8.91
4	<b>Closing GFA (1+2+3)</b>	<b>1946.64</b>	<b>3833.11</b>

BSPTCL has requested the Commission to approve the GFA as per above Table and considering provisions of Section 131 of the Electricity Act, 2003 and Transfer Scheme.

#### Commission's analysis

The Commission has arrived at the opening and closing GFA considering the capitalisation approved. The opening GFA for FY 2013-14 has been considered based on the closing GFA of audited annual accounts for FY 2012-13. The opening GFA value includes the land revalued. The opening value of GFA, Value of assets (Land) revalued, additions and closing GFA as given in the Table below:

Table 4.18: Gross Fixed Assets approved in review for FY 2013-14

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	Opening GFA (on 1-4-2013)	1547.13	3513.08	3513.08
2	Less: Assets Revalued			1255.06
3	<b>Original value of GFA (1-2)</b>	<b>1547.13</b>	<b>3513.08</b>	<b>2258.02</b>
4	Additions during the year	388.00	311.12	311.80
5	Add : IDC	11.51	8.91	8.91
6	<b>Closing GFA (3+4+5) (depreciable assets)</b>	<b>1946.64</b>	<b>3833.11</b>	<b>2578.73</b>

## 4.9 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 adopted the approach considered by the Commission in Tariff Order for FY 2013-14. 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 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 2013-14 as detailed in the Table below:

**Table 4.19: Projected Depreciation for FY 2013-14**

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	<b>Opening GFA</b>	<b>1547.13</b>	<b>3513.08</b>
2	Additions during the year	388.00	311.12
3	Add: IDC	11.51	8.91
4	Closing GFA (1+2+3)	1946.64	3833.11
5	<b>Average GFA <math>\{(1+4)/2\}</math></b>	<b>1746.89</b>	<b>3673.09</b>
6	Weighted average rate of depreciation	5.12%	5.12%
7	Depreciation (5*6)	89.44	188.06
8	Opening Grants	679.31	1622.44
9	Grants during the year	211.00	45.47
10	<b>Total Grants (8+9)</b>	<b>890.31</b>	<b>1667.91</b>
11	Average Grants $\{(8+10)/2\}$	784.81	1645.18
12	Weighted average rate of depreciation	5.12%	5.12%
13	Depreciation. on assets created out of grants (11*12)	40.18	84.23
14	Net Depreciation for GFA on Loans (7-13)	49.26	103.83

BSPTCL has requested the Commission to approve the computation of depreciation for FY 2013-14.

### Commission's analysis

The Commission has examined the depreciation computation of the Petitioner. The GFA includes the assets (Land) revalued by Rs. 1255.06 crore.

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. 1302.52 crore (including revaluation of Land by Rs. 1255.06 crore) based on the land value reported in the audited annual accounts for FY 2012-13.

The opening value of GFA, Value of assets (Land) revalued, 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 4.20: Approved Depreciation for FY 2013-14**

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	Opening GFA (on 1-4-13)	1547.13	3513.08	3513.08
2	<b>Less: Assets (Land) Revalued</b>		0.00	1255.06
3	<b>Original value of GFA (1-2)</b>	<b>1547.13</b>	<b>3513.08</b>	<b>2258.02</b>
4	<b>Less: Value of Land (as per accounts)</b>		0.00	47.46
5	<b>Depreciable GFA (3-4)</b>	<b>1547.13</b>	<b>3513.08</b>	<b>2210.56</b>
6	Additions during the year	388.00	311.12	311.80

7	Add: IDC	11.51	8.91	8.91
8	Closing GFA (5+6+7)	1946.64	3833.11	2531.27
9	<b>Average GFA <math>\{(5+8)/2\}</math></b>	<b>1746.89</b>	<b>3673.10</b>	<b>2370.92</b>
10	Weighted average rate of depreciation	5.12%	5.12%	5.12%
11	Depreciation (9*10)	89.44	188.06	121.39
12	Opening Grants	679.31	1622.44	1622.44
13	Grants during the year	211.00	45.47	172.97
14	<b>Total Grants (12+13)</b>	<b>890.31</b>	<b>1667.91</b>	<b>1795.41</b>
15	Average Grants $\{(12+14)/2\}$	784.81	1645.18	1708.93
16	Weighted average rate of depreciation	5.12%	5.12%	5.12%
17	Depreciation. on assets created out of grants (15*16)	40.19	84.23	87.50
18	Net Depreciation for GFA on loan (11-17)	<b>49.25</b>	<b>103.83</b>	<b>33.89</b>

The Commission accordingly, considers depreciation of Rs. 33.89 crore for FY 2013-14 under performance review

#### 4.10 Interest on Loans

##### Petitioner's Submission

The Petitioner has submitted that they have considered the opening loan balance for 1<sup>st</sup> April 2013 as per provisional accounts for November'2012 to March'2013 of the Petitioner.

The additions to loans are considered as per funding mechanism and the weighted average rate of interest for existing and new loans is considered and applied on the average loan balances.

BSPTCL has projected the interest on loans for FY 2013-14 as detailed in the Table below:



Table 4.21: Projected Interest on Loan for FY 2013-14

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	<b>Opening loan balance</b>	<b>190.23</b>	<b>172.05</b>
2	Additions during the year	177.00	137.15
3	Repayment	49.26	103.83
4	Closing Loan (1+2-3)	317.97	205.37
5	<b>Average Loan <math>\{(1+4)/2\}</math></b>	<b>254.10</b>	<b>188.71</b>
6	Interest rate	13.00%	13.00%
7	<b>Interest &amp; Finance Charges ( 5 * 6 )</b>	<b>33.03</b>	<b>24.53</b>

BSPTCL has requested the Commission to approve the interest rate as well as interest on loan amount for FY 2013-14.

#### Commission's analysis

The Commission has examined the computation of interest and finance charges projected by the Petitioner. The Petitioner has adopted the opening loan (1<sup>st</sup> April 2013) as per the annual accounts of BSPTCL for FY 2012-13.

The Petitioner has not furnished the source wise loan details drawn/used for creation of assets, i.e. source-wise funds drawn/tied up for execution of capital expenditure schemes. However, the Petitioner has considered the loan addition based on capitalisation of CWIP. Repayment of loan during FY 2013-14 is considered equivalent to Depreciation for the year 2013-14. The interest rate is considered as per the MYT Tariff Order dated 15<sup>th</sup> March 2013 for FY 2013-14.

The Commission has considered the computation of the Petitioner and interest on loans considered is given in the Table below:

Table 4.22: Approved Interest on Loan for FY 2013-14

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	<b>Opening loan balance</b>	<b>190.23</b>	<b>172.05</b>	<b>172.05</b>
2	Additions during the year	177.00	137.15	137.15
3	Repayment	49.26	103.83	33.89
4	Closing Loan (1+2-3)	317.97	205.37	275.31
5	<b>Average Loan {(1+4)/2}</b>	<b>254.10</b>	<b>188.71</b>	<b>223.68</b>
6	Interest rate	13.00%	13.00%	13.00%
7	<b>Interest &amp; Finance Charges ( 5 * 6 )</b>	<b>33.03</b>	<b>24.53</b>	<b>29.08</b>

The Commission accordingly, approves the interest on loans of Rs.29.08 crore for FY 2013-14

#### 4.11 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 2013-14;

- (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<sub>n</sub> is the wholesale price index increase for immediate preceding year over previous year.

**Table 4.23: O&M Expenses - weightage of indexation/inflation factor**

Sl. No.	Particulars	WPI	CPI	Total
1	Weightage	0.45	0.55	1.00
2	<b>Index points for FY 2011-12</b>	<b>156.13</b>	<b>194.83</b>	
3	Indexation n-1 (index point * weightage)	70.26	107.16	177.42
4	<b>Index points for FY 2012-13</b>	<b>167.58</b>	<b>215.17</b>	
5	Indexation n (index point * weightage)	75.41	118.34	193.75
6	<b>Combined inflation {( 5-3) / 3}</b>			<b>9.21%</b>

**Commission’s analysis:**

The Commission has considered the combined weighted indexation/inflationary index at 9.21% of CPI and WPI for considering increase of O&M expenses.

#### 4.12 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 2013-14 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 2013-14 as detailed in the Table below:

**Table 4.24: Employee Cost for FY 2013-14 (RE) proposed by the Petitioner**

(Rs. crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	Employee cost	162.25	129.87
2	Less: Terminal benefits pertaining to erstwhile BSEB	84.05	36.91
<b>3</b>	<b>sub-total Cost</b>	<b>78.20</b>	<b>92.96</b>
4	Less: Employee cost capitalised	2.93	1.67
<b>5</b>	<b>Total Employee Cost</b>	<b>75.27</b>	<b>91.29</b>

The Petitioner has requested the Commission to approve the revised projections of employee expenses for FY 2013-14.

#### **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 2012-13.

The Board of Trustees of the BSEE Master trust in the meeting dated 21.06.2013 decided that the contribution rate for FY 2012-13 be made applicable provisionally for FY 2013-14 subjected to adjustments as per the final rate received from actuary i.e. M/s PFC Consulting Ltd. The employee cost includes the company's contribution for existing employee's future terminal benefits. It was informed by the Petitioner that actuary report of valuation of terminal benefits of employee's as on 31<sup>st</sup> March 2014 is yet to be finalized by the actuary i.e. M/s PFC Consulting Ltd.

The Commission has considered the employee cost based on 5 months (November'12 to March'13) actual expenditure (pro-rata projected per year for FY 2012-13) as per audited annual accounts of BSPTCL for FY 2012-13 with escalation at 9.21% (inflation index) as detailed in the Table below:

Table 4.25: Approved Employee Cost for FY 2013-14

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	Employee cost	162.25	129.87	
2	Employee cost {projected per year for FY 2012-13 based on actuals of 5 months (Nov'12 to March'13)}			81.43
3	Add: indexation @ 9.21%			7.50
4	<b>sub-total (1 to 3)</b>	<b>162.25</b>	<b>129.87</b>	<b>88.93</b>
5	Less: Support by State Government against terminal benefits	84.05	36.91	
6	<b>Employee cost (4-5)</b>	<b>78.20</b>	<b>92.96</b>	<b>88.93</b>
7	Less: Employee cost capitalised (@1.8% on sl.no.6)	2.93	1.67	1.60
8	<b>Net employee cost (6 - 7)</b>	<b>75.27</b>	<b>91.29</b>	<b>87.33</b>

The Commission, accordingly, considers net employee cost at Rs. 87.33 crore for FY 2013-14 (RE) as detailed in the above Table.

#### 4.13 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. 3500 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 has estimated R&M expenses as a % of Gross Fixed Assets (GFA) and thereafter escalating by inflationary indices.

BSPTCL has projected R&M expenses @ 3% of Opening GFA and further inflationary increase @ 9.21% for FY 2013-14. The details of R&M expenses projected by the Petitioner are as given in the Table below:

**Table 4.26: Projected Repairs and Maintenance expenses for FY 2013-14**  
(Rs. crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	Opening GFA		3513.00
2	% of GFA		3.00%
3	<b>R&amp;M Cost</b>	<b>9.31</b>	<b>105.39</b>
4	Inflationary index		9.21%
5	<b>R&amp;M Cost</b>	<b>9.31</b>	<b>115.10</b>

BSPTCL has requested the Commission to approve the R&M expenses for FY 2013-14 as projected in the Table above.

#### **Commission's analysis**

The Commission has examined the R&M expenses projected by BSPTCL. The Commission has approved Rs.9.31 crore towards R&M expenses for FY 2013-14 in the Tariff Order for FY 2013-14.

As per the annual accounts of BSPTCL for FY 2012-13 (November'12 to March'13), Rs.5.70 crore R&M expenses was incurred for 5 months which works out to Rs.13.68 crore per year (FY 2012-13).

The Commission has considered the projected actual expenditure of FY 2012-13 with inflationary escalation of 9.21% and considered the R&M expenses for FY 2013-14 as detailed in the Table below:

Table 4.27: Approved R&amp;M expenses for FY 2013-14

				(Rs. crore)
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	Opening GFA		3513.00	
2	R&M Cost {projected per year for FY 2012-13 based on actuals of 5 months (Nov'12 to March'13)}			13.68
3	% of GFA		3.00%	
4	<b>R&amp;M Cost</b>		<b>105.39</b>	<b>13.68</b>
5	Inflationary index		9.21%	9.21%
6	<b>R&amp;M Cost</b>	<b>9.31</b>	<b>115.10</b>	<b>14.94</b>

The Commission, accordingly, considered R&M expenses at Rs. 14.94 crore for FY 2013-14 (RE) as detailed in the above Table.

#### 4.14 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. 10.99 crore for FY 2013-14 (RE) as furnished in Table below:

Table 4.28: Proposed Administration and General Expenses for FY 2013-14

				(Rs. crore)
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	
1	A&G Expenses	5.18	11.19	
2	Less: A&G expenses capitalised	0.20	0.20	
3	<b>Net A&amp;G expenses</b>	<b>4.98</b>	<b>10.99</b>	

BSPTCL has requested the Commission to approve the A&G expenses for FY 2013-14 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.4.98 crore towards A&G expenses for FY 2013-14 in the Tariff Order for FY 2013-14.

As per the annual accounts of BSPTCL for FY 2012-13 (November'12 to March'13), Rs.4.12 crore A&G expenses were incurred for 5 months, projected to Rs.9.89 crore per year (FY 2012-13).

The Commission has considered the projected actual expenditure of FY 2012-13 with inflationary escalation of 9.21% and considered the A&G expenses for FY 2013-14 as detailed in the Table below:

**Table 4.29: Approved Administration & General Expenses for FY 2013-14 (RE)**

(Rs. crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	A&G Expenses {projected per year for FY 2012-13 based on actuals of 5 months (Nov'12 to March'13)}			9.89
2	Inflationary index 9.21%			0.91
3	<b>A &amp; G Expenses</b>	<b>5.18</b>	<b>11.19</b>	<b>10.80</b>
4	Less: A&G cost capitalised	0.20	0.20	0.43
5	<b>Net A&amp;G expenses</b>	<b>4.98</b>	<b>10.99</b>	<b>10.37</b>

The Commission considered Rs.10.37 crore for FY 2013-14 (RE) towards net Administration and General Expenses.

#### 4.15 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 BSPGCL, 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. 31.47 crore for FY 2013-14 (RE) as furnished in table below:

Table 4.30: Expenses of Holding Company for FY 2013-14

(Rs. Lacs)

Particulars	Apr-13	May-13	Jun-13	Jul-13	Total for 4 months	Monthly Average	Projections for 8 months	Total for 12 months
Employee cost	241.20	186.42	156.34	119.40	703.36	175.84	1406.72	2110.08
A&G Expenses	158.65	123.00	17.93	27.27	326.85	81.7125	653.7	980.55
R&M expenses	15.71	0.36	2.02	0.58	18.67	4.6675	37.34	56.01
<b>Total</b>	<b>415.56</b>	<b>309.78</b>	<b>176.29</b>	<b>147.25</b>	<b>1048.88</b>	<b>262.22</b>	<b>2097.76</b>	<b>3146.64</b>

Table 4.31: Allocation of Expenses of Holding company for FY 2013-14

(Rs. Crore)

Head	Total for FY 2013-14	BSPGCL	BSPTCL	NBPDCL	SBPDCL
<b>Establishment expenses is allocated on the basis of Employee Cost Ratio</b>					
Employee cost for FY 2012-13	203.26	12.32	33.93	62.03	94.98
Employee cost Ratio	100.00 %	6.06%	16.69%	30.52%	46.73%
Allocation of establishment expenses - a	21.10	1.28	3.52	6.44	9.86
<b>Administrative and O&amp;M expenses are allocated on the basis of Equity Deployed Ratio</b>					
Opening Equity for FY 2013-14	1974.88	551.98	375.43	384.90	662.57
Equity Deployed Ratio	100.00 %	27.95%	19.01%	19.49%	33.55%
Allocation of Administrative expenses - b	9.81	2.74	1.86	1.91	3.29
Allocation of O&M expenses - c	0.56	0.16	0.11	0.11	0.19
Total allocation for FY 2013-14 (a+b+c)	31.47	4.18	5.49	8.46	13.34

BSPTCL has requested the Commission to approve the expenditure as part of overall O&M expenditure for FY 2013-14 (RE).

#### Commission's analysis:

The Commission has examined the allocation of Holding Company expenses incurred towards Employee cost, Administration and General Expenses and O&M expenses and considered the allocation in terms of Bihar State Electricity Reforms Transfer Scheme, 2012 for FY 2013-14 (RE) as detailed in the Table below:

**Table 4.32: Allocation of Expenses of Holding Company approved for FY 2013-14 (RE)**  
(Rs. Crore)

Particulars	BSPGCL	BSPTCL	NBPDCL	SBPDCL	Total
Employee cost	1.28	3.52	6.44	9.86	21.10
R&M expenses	0.16	0.11	0.11	0.19	0.57
A&G Expenses	2.74	1.86	1.91	3.29	9.80
<b>Total</b>	<b>4.18</b>	<b>5.49</b>	<b>8.46</b>	<b>13.34</b>	<b>31.47</b>

#### 4.16 Summary of Operations and Maintenance (O&M) Expenses

**Table 4.33: Total O&M cost considered by the Commission for FY 2013-14 (RE)**  
(Rs. crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	Employee cost	75.27	91.29	88.93
2	R&M expenses	9.31	115.10	14.94
3	A&G Expenses	4.98	10.99	10.80
4	Holding company expenses allocated		5.49	5.49
5	<b>Total O&amp; M cost</b>	<b>89.56</b>	<b>222.87</b>	<b>120.16</b>
6	Less: O&M exp. capitalised	3.13	1.87	2.03
7	<b>Net O&amp;M expenses</b>	<b>86.43</b>	<b>221.00</b>	<b>118.13</b>

The Commission considered the revised Net O&M costs at Rs. 118.13 crore for FY 2013-14 (RE).

#### 4.17 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 4.34: 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 <sup>st</sup> April of the year

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

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

**Table 4.35: Projected Interest on working capital for FY 2013-14 (RE)****(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	O&M exp. (1 month)	7.46	18.57
2	Maintenance spares @1% of opening GFA with 6% escalation	16.40	37.24
3	Receivables - 2 months	35.65	100.34
4	Total working capital	59.51	156.15
5	Rate of interest	14.45%	14.45%
6	<b>Interest on working capital</b>	<b>8.60</b>	<b>22.56</b>

### 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 1<sup>st</sup> 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 1<sup>st</sup> April'2013 as given in the Table below:

Table 4.36: Approved Interest on working capital for FY 2013-14 (RE)

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	O&M exp. (1 month)	7.46	18.57	10.01
2	Maintenance spares @1% of opening GFA with 6% escalation	16.40	37.24	23.94
3	Receivables - 2 months	35.65	100.34	36.86
4	Total working capital	59.51	156.15	70.81
5	Rate of interest	14.45%	14.45%	14.45%
6	<b>Interest on working capital</b>	<b>8.60</b>	<b>22.56</b>	<b>10.23</b>

The Commission considered the interest on working capital at Rs. 10.23 crore for FY 2013-14 (RE).

#### 4.18 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 2012-13. During the process of restructuring, the equity component has got re-valued and the Petitioner has requested the Commission to consider the same figures for ARR purpose. The Petitioner submitted that equity capital is excluding revaluation of reserves and subsidies and is claimed as per Regulation 72 (2) of BERC Tariff Regulations 2007.

BSPTCL has submitted that Section 131 of the Electricity Act, 2003 provides that any transaction pursuant to transfer scheme shall be binding on all persons. Section 131 of the Electricity Act, 2003 is reproduced hereunder

***Notwithstanding anything contained in this section, where; (b) a transaction of any description is effected in pursuance of a transfer scheme, it shall be binding on all persons including third parties and even if such persons or third parties have not consented to it.***

BSPTCL has computed the return on equity for FY 2013-14 as detailed in the Table below:

**Table 4.37: Projected Return on Equity for FY 2013-14**

(Rs. crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	Equity	235.00	1630.46
2	Add: Equity During the year		128.50
3	<b>Closing equity balance (1+2)</b>	<b>235.00</b>	<b>1758.96</b>
4	<b>Average equity {(1+3)/2}</b>	<b>235.00</b>	<b>1694.71</b>
5	Rate of Return per annum %	14.00%	14.00%
6	<b>Return on Equity - Opening Equity</b>	<b>32.90</b>	<b>228.26</b>

BSPTCL has requested the Commission to consider the RoE as per the computations furnished in the Table above for FY 2013-14 (RE)

#### **Commission's analysis**

The Commission has examined the computation of RoE claim of BSPTCL. The Petitioner has computed RoE on the enhanced Equity. It was stated that during the process of restructuring the equity component has got re-valued. It was reported by the Petitioner that finalization/approval of State Government to the final transfer scheme is in process. Hence, the Commission has not considered the enhanced equity in the absence of specific orders from the State Government.

Regulation 73 (2) (c) of the BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007, specifies that "***Return on Equity shall be computed on the equity base determined in accordance with Regulation 71 and shall be @ 14% per annum***".

Regulation 71 (1) specifies that;

- (a) In case of all projects, the Debt : Equity ratio as on the date of commercial operation shall be 70 : 30 for determination of tariffs.*
- (b) However, the Commission may consider equity higher than 30% if satisfied that the higher equity deployed is in the interest of the general public.*
- (c) Further, if the equity employed is less than 30%, the actual Debt and Equity shall be considered for determination of tariff.*
- (d) It is also specified that in case of existing projects the actual Debt : Equity ratio shall be used for tariff determination.*
- (e) The Debt and Equity amount arrived as above shall be used for calculation of Interest on Loan, Return on Equity, etc.*

However, in view of the data constraints with respect to capex vis-à-vis source of funding, etc., the Commission has considered the methodology adopted in MYT order dated 15<sup>th</sup> March 2013 for computation of Interest on Loan and Return on Equity for FY 2013-14 (RE). The funding of capitalisation of capex is considered as discussed under Capital Expenditure.

Accordingly, the Commission has considered equity at Rs.235 crore considered for MYT period in the Tariff Order dated 15<sup>th</sup> March 2013 for FY 2013-14. The rate of return on equity has been considered @14% as per the BERC Tariff Regulations. The Return on Equity considered by the Commission is as detailed in the Table below:

**Table 4.38: Approved Return on Equity for FY 2013-14 (RE)**

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	Equity	235.00	1630.46	235.00
2	Add: Equity During the year		128.50	
3	<b>Closing equity balance (1+2)</b>	<b>235.00</b>	<b>1758.96</b>	<b>235.00</b>
4	<b>Average equity {(1+3)/2}</b>	<b>235.00</b>	<b>1694.71</b>	<b>235.00</b>
5	Rate of Return per annum %	14.00%	14.00%	14.00%
6	<b>Return on Equity - Opening Equity</b>	<b>32.90</b>	<b>228.26</b>	<b>32.90</b>

**The Commission approves the Return on Equity at Rs.32.90 crore for FY 2013-14 (RE) as detailed in the Table above.**

#### **4.19 Non-Tariff Income**

##### **Petitioner's submission:**

BSPTCL has submitted that in the absence of actual data for entire financial year, has Rs.1.02 crore for FY 2013-14 and requested the Commission to approve the Non-tariff income for FY 2013-14

##### **Commission's analysis:**

The Commission in MYT order dated 15<sup>th</sup> March 2013 in the Tariff order for FY 2013-14 has approved Non-tariff income of Rs.0.51 crore for the year 2013-14 for Transmission function.

The Commission considered the submission of the Petitioner and the non-tariff income of Rs.1.02 crore for FY 2013-14 (RE) is approved.

#### **4.20 Transmission charges for FY 2013-14**

##### **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 2013-14 are given in the Table below:



Table 4.39: Projected Annual Fixed Charges/ (ARR) for FY 2013-14 (RE)

(Rs. crore)

Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	O&M expenses (Gross)	89.56	222.87
2	Employee cost	75.27	91.29
3	R&M expenses	9.31	115.10
4	A&G Expenses	4.98	10.99
5	Holding company expenses allocated	0.00	5.49
6	<b>Less: O&amp;M exp. capitalised</b>		
7	Interest and finance charges	33.03	24.53
8	Interest on working capital	8.60	22.56
9	Depreciation	49.26	103.83
10	Return on Equity	32.90	228.26
<b>11</b>	<b>Total Requirement</b>	<b>213.35</b>	<b>602.05</b>
12	Less: Non-tariff income	0.51	1.02
<b>13</b>	<b>Net Annual Revenue Requirement</b>	<b>212.84</b>	<b>601.03</b>

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 dt.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 2013-14 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 charges / Transmission charges considered by the Commission for FY 2013-14 (RE) are as detailed in the Table below:

Table 4.40: Approved Annual Fixed Charges / ARR for FY 2013-14 (RE)

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	O&M expenses (Gross)	89.56	222.87	
2	O&M expenses			122.19
3	Employee cost	75.27	91.29	88.93
4	R&M expenses	9.31	115.10	14.94
5	A&G Expenses	4.98	10.99	10.80
6	Holding company expenses allocated	0.00	5.49	5.49
7	<b>Less:</b> O&M expenses capitalised			2.03
8	Interest and finance charges	33.03	24.53	29.08
9	Interest on working capital	8.60	22.56	10.23
10	Depreciation	49.26	103.83	33.89
11	Return on Equity	32.90	228.26	32.90
<b>12</b>	<b>Total Requirement</b>	<b>213.35</b>	<b>602.05</b>	<b>224.23</b>
13	<b>Less:</b> Non-tariff income	0.51	1.02	1.02
<b>14</b>	<b>Net Aggregate Revenue Requirement</b>	<b>212.84</b>	<b>601.03</b>	<b>223.21</b>

#### 4.21 Revenue Gap / (Surplus) for FY 2013-14 (RE)

##### Petitioner's submission

The Petitioner has submitted that 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 for FY 2013-14. The Petitioner has submitted the transmission charges as per revised projections in the Table below:

Table 4.41: Projected revised Transmission charges for FY 2013-14

(Rs. Crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	Annual Transmission charges	212.84	601.03
2	Transmission cost to be realized per month from Distribution Companies	17.74	50.09

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

**Table 4.42: Projected revenue gap / (surplus) for FY 2013-14****(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)
1	Revised ARR for FY 2013-14	212.84	601.03
2	Less: Approved Annual Transmission Charges for FY 2013-14	212.84	212.84
3	<b>Revenue Gap / (Surplus) for FY 2013-14 (1-2)</b>	<b>0.00</b>	<b>388.19</b>

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

**Commission's analysis:**

Based on the Commission's detailed analysis of the projections made by the Petitioner, the Commission has arrived at a net deficit of Rs. 10.37 crore for FY 2013-14 as detailed in the Table below:

**Table 4.43: Projected revenue gap / (surplus) for FY 2013-14****(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT for FY 2013-14	Projected by BSPTCL for FY 2013-14 (RE)	Now approved for FY 2013-14 (RE)
1	Aggregate Revenue Requirement for FY 2013-14	212.84	601.03	223.21
2	Less: Approved Annual Transmission Charges for FY 2013-14 in tariff order for FY 2013-14	212.84	212.84	212.84
3	<b>Revenue Gap / (Surplus) for FY 2013-14 (1-2)</b>	<b>0.00</b>	<b>388.19</b>	<b>10.37</b>

The additional expenditure of Rs.10.37 Crore worked out in the review for FY 2013-14 (RE) is not considered in the revised ARR for FY 2014-15 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 2013-14 will be considered in the ARR of FY 2014-15, after truing-up of FY 2013-14 when the audited annual accounts will be made available by BSPTCL.

## 5. Determination of Revised Aggregate Revenue Requirement (ARR) and Transmission Tariff for FY 2014-15

### 5.1 Introduction

BSPTCL has submitted that the Commission has approved MYT figures for FY 2013-14 to FY 2015-16 and seek opportunity to review/revise its ARR for FY 2014-15. Further, it is stated that the revised ARR for FY 2015-16 would be filed in next year petition along with annual performance review of FY 2014-15. BSPTCL has filed its Revised Annual Revenue Requirement for FY 2014-15 for consideration of the Commission.

The Commission has analyzed the components of expenditure claimed in the ARR 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 August'13**) is as given below:

**Table 5.1: Existing transmission network (as on August'13)**

Voltage	No of Substations	Line length (CKM)	Transformation Capacity (MVA)
400 KV		75	
220 / 132 / 33 KV	10	1435	
220 / 132 KV	1		3550
132 / 33 KV	75	5819	4952
132 / 25 KV			110
<b>Total</b>	<b>86</b>	<b>7329</b>	<b>8612</b>

### 5.3 Performance of the Transmission System

#### Petitioner's Submission

BSPTCL has submitted the transmission loss trajectory considered by the Commission in MYT order as provided in the Table below:

**Table 5.2: Transmission Loss approved in MYT order**

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

The Petitioner has submitted that the transmission loss projected were on provisional basis as independent operations of the transmission company having started only w.e.f.1<sup>st</sup> November 2012. Further, it is stated that losses in advanced states which have initiated reforms process much earlier are still having transmission loss more than 4% and requested the Commission to approve transmission losses for this control period on actual basis and submitted the revised transmission loss trajectory for consideration as furnished in the Table below:

**Table 5.3: Revised Transmission Loss Trajectories**

Particulars	FY 2013-14	FY 2014-15	FY 2015-16
Approved % Transmission Loss	4.02%	3.97%	3.92%
Revised Trajectory of Transmission loss	4.05%	4.05%	4.05%

BSPTCL has requested the Commission to approve the revised transmission loss trajectory for FY 2014-15.

#### Commission's analysis:

The Commission has examined the issue and considered the transmission loss as controllable parameter and retains the transmission loss trajectory at 3.97% for FY 2014-15 as approved in the Tariff Order for FY 2013-14. The Commission directs BSPTCL to conduct energy audit for the transmission system by measuring the input

to the system and power delivered to DISCOMs for FY 2013-14 and reports the actual loss in the system to consider revised transmission loss trajectory.

#### 5.4 Capital Investment Plan

##### Petitioner's Submission:

BSPTCL has submitted in the MYT petition the capital Investment plan which was approved by the Commission in the Tariff Order dated 15<sup>th</sup> March 2013 as detailed in the Table below:

**Table 5.4: Capital Investment**

								(Rs. Crore)
Sl. No.	Particulars	Total Cost	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total	Remaining (2016-17)
1	12 <sup>th</sup> Plan-18 <sup>th</sup> EPS (BRGF)	6338	437	210	844	1960	3450	2888
2	Immediate removal of transmission constraints	310	201	109			310	
3	ADB funded schemes	197	197				197	
4	Grand Total	6845	835	319	844	1960	3957	2888

**Table 5.5: Capex and Capitalisation approved for FY 2012-13 to FY 2015-16**

							(Rs. Crore)
Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Balance	
1	Total investment	835	319	844	1960		
2	Capitalisation of CWIP Rs.139 crore	42	42	42			
3	New Investment	250	346	684	968		
	FY 2012-13 - Rs.835 crore	250	250	335			
	FY 2013-14 - Rs.319 crore		96	96	127		
	FY 2014-15 - Rs.844 crore			253	253	338	
	FY 2015-16 - Rs.1960 crore				588	1372	
4	<b>Total (2+3)</b>	<b>292</b>	<b>388</b>	<b>726</b>	<b>968</b>	<b>1710</b>	

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 12<sup>th</sup> 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 submitted that the capital expenditure envisaged to be under taken from 2015-16 onward years covered under Phase-IV Transmission planning (Rs.3000 crore) would be under taken by Bihar Grid Company Limited (BGCL) a joint venture company with 50 : 50 equity from PGCIL and BSPHCL incorporated under the companies act on 04-01-2013. It is submitted that the Commission has granted license for 25 years to implement the transmission projects for 12<sup>th</sup> Five year Plan in a phased manner on Build, Own, operate and maintain basis in the State of Bihar.

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 MYT petition 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.3596.74 crore from FY 2012-13 to FY 2015-16 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:

**Table 5.6: Capital Investment Plan proposed by the Petitioner**

(Rs. Crore)							
Sl. No.	Particulars	Total Cost	2012-13	2013-14	2014-15	2015-16	Total
1	12 <sup>th</sup> 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	<b>Total</b>	<b>3596.74</b>	<b>127.64</b>	<b>660.39</b>	<b>1879.01</b>	<b>929.70</b>	<b>3596.74</b>

The details of the schemes are given below:

**(a) 12<sup>th</sup> Plan Transmission and Sub-transmission system strengthening in Bihar Phase-III – Rs.1958.50 crore**



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

Sl. No.	Particulars	Unit	Amount (Rs. Crore)
1	220 / 132 / 33 KV substations (incl. extension)	11 Nos	273.51
2	132 / 33 KV substations (incl. extension)	38 Nos.	230.26
3	220 KV Line	480 CKM	280.14
4	132 KV line	661 CKM	174.81
5	Land acquisition for substation and R&R compensation		62.15
6	Crop, tree, forest compensation and others		66.43
7	Data & voice connectivity		12.78
8	Sonenagar 220 kv GSS and associated lines		108.00
9	R&M of old operating 132/33 KV GSS	20 Nos	99.96
10	Contingencies and other misc. works		33.84
11	Civil works for Substations		17.05
12	Survey, non-residential buildings, etc.		11.10
13	Other planned additional works		588.47
<b>14</b>	<b>Total</b>		<b>1958.50</b>

**(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 detailed hereunder:

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
<b>10</b>	<b>Total</b>		<b>472.53</b>

**(c) ADB funded Schemes – Rs.296.90 crore**

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

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	Other works .		100.00
<b>11</b>	<b>Total</b>		<b>296.90</b>

**(d) State Plan Schemes – Rs.502.33 crore**

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

Sl. No.	Particulars	Amount (Rs. Crore)
1	220/132 KV GSS, Bihta 2x100 MVA	99.65
2	132/33 KV GSS at Jandaha,	25.00
3	132/33 KV GSS at Tehta	51.20
4	132/33 KV GSS at Ekma (Saran)	5.10
5	132/33 KV GSS (4x50 MVA) at Kabrigahiya along with 33/11 KV SS (2x10 MVA) at Kabrigahiya	77.36
6	132/33 KV GSS at Sherghati and 132 KV Bodhgaya – Sherghati line	25.10
7	Construction of transmission facilities to evacuate power	26.12
8	Erection of various transmission lines	7.86
9	Construction of 5 Nos additional 132/33 KV bays and 5 Nos. 33 KV bays at Sitamarhi, Bihta, Khagaul, Ara and Nawada	8.70
10	Purchase of 3 Nos. 50 MVA 132/33 KV transformers for Siwan, Nawada and Jamalpur GSS	7.92
11	Renovation of old GSS	8.88
12	Purchase of transformers (150/100/50 MVA)	49.04
13	Construction of control room building, residential complex and building, boundary wall, internal road, etc. at old GSS	76.83
14	Construction of park and beautification of Kabigahia Thermal Power Complex	27.31
15	Testing equipment for testing of GSS equipments	6.26
<b>16</b>	<b>Total</b>	<b>502.33</b>

**(e) Installation of Grid Sub Stations through State Plan funding – Rs.350 crore**

BSPTCL has planned installation of 14 Nos. of Grid Sub Stations in the areas where there is need for augmentation of the transmission capacity. However, the BSPTCL has not furnished the details of GSS and the level of voltages.

**(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 fully equipped 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.13.48 crore**

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

Sl. No.	Particulars	Contract amount for project	Expected Phasing of Expenditure	
			2013-14	2014-15
1	ULDC upgradation	5.98	3.59	2.39
2	Other miscellaneous works – Renovation of 4 <sup>th</sup> floor, BSPTCL office	2.50	1.00	1.50
3	Office furniture, computers, vehicles, etc.	5.00	1.00	4.00
<b>4</b>	<b>Total</b>	<b>13.48</b>	<b>5.59</b>	<b>7.89</b>

The Petitioner has submitted that it is executing the upgradation 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.

BSPTCL has requested the Commission to approve the total capital expenditure plan proposed for FY 2013-14 and for FY 2014-15.

**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 (g)} at a total cost of Rs.3596.74 crore.

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

**Table 5.7: Capital Investment considered by the Commission****(Rs. Crore)**

Sl. No.	Particulars	Total Cost	2012-13	2013-14	2014-15	2015-16	Total
1	12 <sup>th</sup> 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
7	Capital expenditure schemes through Internal Resources	13.48		5.59	7.89		13.48
8	<b>Total</b>	<b>3596.74</b>	<b>127.64</b>	<b>660.39</b>	<b>1879.01</b>	<b>929.70</b>	<b>3596.74</b>

## 5.5 Capitalisation

### Petitioner's submission:

BSPTCL has submitted that it has adopted the approach of the Commission from the MYT order and considered capitalisation of investment from the schemes in opening capital works in progress, the new schemes under BRGF, ADB and others which are classified as New Schemes and R&M schemes. BSPTCL has furnished the capitalisation schedule and year-wise capitalisation of investment in the following Tables:

**Table 5.8: Assumptions for Capitalisation**

Particulars	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year
For Opening CWIP of FY 2013-14	30%	30%	40%
For New Schemes	30%	30%	40%
For R&M Schemes	30%	30%	40%

**Table 5.9: Year-wise Capitalisation proposed by the Petitioner**

(Rs. crore)

Sl. No.	Particulars	2013-14	2014-15	2015-16	2016-17	2017-18	Total
1	Total investment	660.39	1879.02	929.70			<b>3469.10</b>
2	Opening CWIP	113.68	113.68	151.57			<b>378.94</b>
3	<b>Capitalisation of New Investment</b>	<b>197.44</b>	<b>770.26</b>	<b>1102.17</b>	<b>1027.36</b>	<b>371.88</b>	<b>3469.11</b>
	From capex of 2013-14	197.44	201.03	261.92			<b>660.39</b>
	From capex of 2014-15		569.23	561.34	748.45		<b>1879.02</b>
	From capex of 2015-16			278.91	278.91	371.88	<b>929.70</b>
4	<b>Investment capitalised (2+3)</b>	<b>311.12</b>	<b>883.94</b>	<b>1253.74</b>	<b>1027.36</b>	<b>371.88</b>	<b>3848.04</b>

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 capital investment of Rs.3469.10 crore for FY 2013-14 to FY 2015-16 as discussed at para 6.4.

The Commission has considered the assumptions of the Petitioner for capitalisation of investment, which is as per the capitalisation schedule approved by the Commission in MYT period in Tariff Order for FY 2013-14. The capitalisation schedule and the capital expenditure capitalised / transferred to fixed assets i.e. GFA based on the capital investment approved by the Commission are furnished in the Tables below

**Table 5.10: Capitalisation schedule approved by the Commission**

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

**Table 5.11: Capitalisation of capital expenditure approved by the Commission for FY 2013-14 to FY 2015-16 (MYT period) including opening CWIP**

(Rs. Crore)

Sl. No.	Particulars	2013-14	2014-15	2015-16	2016-17	2017-18	Total
1	Total investment	660.39	1879.01	929.70			<b>3469.10</b>
2	Opening CWIP	113.68	113.68	151.58			<b>378.94</b>
3	<b>Capitalisation of New Investment</b>	<b>198.12</b>	<b>761.82</b>	<b>1106.77</b>	<b>1030.51</b>	<b>371.88</b>	<b>3469.10</b>
	From capex of 2013-14	198.12	198.12	264.16			<b>660.39</b>
	From capex of 2014-15		563.70	563.70	751.60		<b>1879.01</b>
	From capex of 2015-16			278.91	278.91	371.88	<b>929.70</b>
4	<b>Total Investment capitalised (2+3)</b>	<b>311.80</b>	<b>875.50</b>	<b>1258.35</b>	<b>1030.51</b>	<b>371.88</b>	<b>3848.04</b>

**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, Loan 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 capital expenditure and capitalisation in the Table below:

**Table 5.12: Scheme wise funding for capital expenditure projected by the Petitioner:**  
(Rs. crore)

Sl. No.	Planned Scheme	Ratio	Capital Expenditure	2013-14	2014-15	2015-16
<b>1</b>	<b>12th Plan Transmission &amp; Sub-Transmission System Strengthening in Bihar - Phase-III</b>		<b>1958.50</b>	<b>300.00</b>	<b>1000.00</b>	<b>658.50</b>
	Equity	100%	1958.50	300.00	1000.00	658.50
	Grant					
<b>2</b>	<b>Strengthening of Sub-Transmission System in Bihar - Extension scheme Phase-II works (Revised)</b>		<b>472.53</b>	<b>125.00</b>	<b>347.53</b>	
	Equity	100%	472.53	125.00	347.53	
	Grant					
<b>3</b>	<b>ADB Funded Scheme</b>		<b>296.90</b>	<b>89.86</b>	<b>128.52</b>	<b>60.00</b>
	Equity					
	Loans	100%	296.90	89.86	128.52	60.00
<b>4</b>	<b>State Plan Scheme</b>		<b>502.33</b>	<b>139.64</b>	<b>253.57</b>	
	Grant					
	Loans	100%	502.33	139.64	253.57	
<b>5</b>	<b>Installation of 14 Nos of GSS (funding through State Plan)</b>		<b>350.00</b>		<b>140.00</b>	<b>210.00</b>
	Equity					
	Loans	100%			140.00	210.00
<b>6</b>	<b>Establishment of BSPTCL's Training Centre (funding through State Plan)</b>		<b>3.00</b>	<b>0.30</b>	<b>1.50</b>	<b>1.20</b>
	Equity					
	Loans	100%		0.30	1.50	1.20
<b>7</b>	<b>Capital Expenditure Schemes through Internal Resources</b>		<b>13.48</b>	<b>5.59</b>	<b>7.89</b>	
	Equity	100%		5.59	7.89	
	Loans					
<b>8</b>	<b>Opening CWIP</b>		<b>378.94</b>			

	Grants	40%				
	Loans	60%				
<b>9</b>	<b>Grand Total</b>		<b>3469.10</b>	<b>660.39</b>	<b>1879.01</b>	<b>929.70</b>
	<b>Grants</b>					
	<b>Equity</b>		<b>2444.51</b>	<b>430.59</b>	<b>1355.42</b>	<b>658.50</b>
	<b>Loans</b>		<b>1024.59</b>	<b>229.80</b>	<b>523.59</b>	<b>271.20</b>

Table 5.13: Scheme wise funding for Capitalisation proposed by the Petitioner:

(Rs. crore)

Sl. No.	Planned Scheme	Ratio	Capital Expenditure	2013-14	2014-15	2015-16
<b>1</b>	<b>12th Plan Transmission &amp; Sub-Transmission System Strengthening in Bihar - Phase-III</b>		<b>1097.55</b>	<b>90.00</b>	<b>390.00</b>	<b>617.55</b>
	Equity	100%	1097.55	90.00	390.00	617.55
	Grant					
<b>2</b>	<b>Strengthening of Sub-Transmission System in Bihar - Extension scheme Phase-II works (Revised)</b>		<b>333.52</b>	<b>37.50</b>	<b>141.76</b>	<b>154.26</b>
	Equity	100%	333.52	37.50	141.76	154.26
	Grant					
<b>3</b>	<b>ADB Funded Scheme</b>		<b>184.97</b>	<b>26.96</b>	<b>65.51</b>	<b>92.50</b>
	Equity					
	Grant					
	Loans	100%	184.97	26.96	65.51	92.50
<b>4</b>	<b>State Plan Scheme</b>		<b>291.78</b>	<b>41.89</b>	<b>117.96</b>	<b>131.93</b>
	Equity					
	Grant					
	Loans	100%	291.78	41.89	117.96	131.93
<b>5</b>	<b>Installation of 14 Nos of GSS (funding through State Plan)</b>		<b>147.00</b>		<b>42.00</b>	<b>105.00</b>
	Equity					
	Grant					
	Loans	100%	147.00		42.00	105.00
<b>6</b>	<b>Establishment of BSPTCL's Training Centre (funding through State Plan)</b>		<b>1.53</b>	<b>0.09</b>	<b>0.54</b>	<b>0.90</b>
	Equity					
	Grant					
	Loans	100%	1.53	0.09	0.54	0.90
<b>7</b>	<b>Capital Expenditure Schemes through Internal Resources</b>		<b>13.48</b>	<b>1.00</b>	<b>12.48</b>	
	Equity	100%	13.48	1.00	12.48	
	Grant					
	Loans					
<b>8</b>	<b>Opening CWIP</b>		<b>378.94</b>	<b>113.68</b>	<b>113.68</b>	<b>151.58</b>



	Equity					
	Grant	40%	151.58	45.47	45.47	60.63
	Loans	60%	227.36	68.21	68.21	90.94
<b>9</b>	<b>Grand Total</b>		<b>2448.77</b>	<b>311.12</b>	<b>883.94</b>	<b>1253.71</b>
	<b>Equity</b>		<b>1444.55</b>	<b>128.50</b>	<b>544.24</b>	<b>771.81</b>
	<b>Grant</b>		<b>151.58</b>	<b>45.47</b>	<b>45.47</b>	<b>60.63</b>
	<b>Loans</b>		<b>852.64</b>	<b>137.15</b>	<b>294.23</b>	<b>421.27</b>

### 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 Petitioner has projected the 12<sup>th</sup> plan transmission and sub-transmission system strengthening scheme - Phase-III works expenditure funding through "Equity". These schemes are funded by the Government of India channelled through Government of Bihar. As could be seen from the Government of Bihar Rajyadesh No.5150 dt.7-11-2013, these schemes {Backward Regions Grant Fund (BRGF) (Special Plan)} are funded by the Government of India and funds received shall be utilized/expended as per the guidelines of the scheme approvals. 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 name of the scheme it self suggests through Grant funds from Central/State Government. Accordingly, the Commission considers the 12<sup>th</sup> plan transmission and sub-transmission system strengthening scheme – Phase-III expenditure as "Grant" only.

Further, Strengthening of Sub-Transmission System in Bihar – Extension Scheme of Phase-2 works were also projected as through "Equity". Normally as per the accounting principles, the equity should be infused in to the business in Cash without any condition attached to it for utilization of equity. The Commission has opined that these works are being executed by PGCIL on behalf of BSPTCL. BSPTCL is making adjustments in the books of accounts on handing over of assets by PGCIL. The value of assets received/recorded in the books of accounts shall be treated as "Grants"

only. The Commission, accordingly, considers the funding of this scheme as “Grants”.

Internal resources represent Retained Surplus/Profits earned by the Company and form part of Reserves. As such, the Commission has not considered the capital expenditure schemes/investment proposed through internal resources as “Equity”.

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

**Table 5.14: Scheme wise funding of capital expenditure considered by the Commission**  
(Rs. crore)

Sl. No.	Planned Scheme	Ratio	Capital Expenditure	2013-14	2014-15	2015-16
1	12th Plan Transmission & Sub-Transmission System Strengthening in Bihar - Phase-III		1958.50	300.00	1000.00	658.50
	Grant	100%	1958.50	300.00	1000.00	658.50
2	Strengthening of Sub-Transmission System in Bihar - Extension scheme Phase-II works (Revised)		472.53	125.00	347.53	
	Grant	100%	472.53	125.00	347.53	
3	ADB Funded Scheme		296.90	89.86	128.52	60.00
	Loan	100%	296.90	89.86	128.52	60.00
4	State Plan Scheme		502.33	139.64	253.57	
	Loan	100%	502.33	139.64	253.57	
5	Installation of 14 Nos of GSS (funding through State Plan)		350.00		140.00	210.00
	Loan	100%	350.00		140.00	210.00
6	Establishment of BSPTCL's Training Centre (funding through State Plan)		3.00	0.30	1.50	1.20
	Loan	100%	3.00	0.30	1.50	1.20
7	Capital Expenditure Schemes through Retained surplus/Internal Resources		13.48	5.59	7.89	
8	<b>Grand Total</b>		3596.74	660.39	1879.01	929.70
	<b>Equity</b>		0.00	0.00	0.00	0.00
	<b>Grant</b>		2431.03	425.00	1347.53	658.50
	<b>Loan</b>		1152.23	229.80	523.59	271.20
	<b>Retained surplus/ internal resources</b>		13.48	5.59	7.89	0.00

Table 5.15: Scheme wise funding of Capitalisation considered by the Commission

(Rs. crore)

Sl. No.	Planned Scheme	Ratio	Capital Expenditure	2013-14	2014-15	2015-16
1	12th Plan Transmission & Sub-Transmission System Strengthening in Bihar - Phase-III		1097.55	90.00	390.00	617.55
	Grant	100%	1097.55	90.00	390.00	617.55
2	Strengthening of Sub-Transmission System in Bihar - Extension scheme Phase-II works (Revised)		333.52	37.50	141.76	154.26
	Grant	100%	333.52	37.50	141.76	154.26
3	ADB Funded Scheme		184.97	26.96	65.51	92.50
	Loans	100%	184.97	26.96	65.51	92.50
4	State Plan Scheme		291.78	41.89	117.96	131.93
	Loans	100%	291.78	41.89	117.96	131.93
5	Installation of 14 Nos of GSS (funding through State Plan)		147.00		42.00	105.00
	Loans	100%	147.00		42.00	105.00
6	Establishment of BSPTCL's Training Centre (funding through State Plan)		1.53	0.09	0.54	0.90
	Loans	100%	1.53	0.09	0.54	0.90
7	Capital Expenditure Schemes through Retained surplus/Internal Resources		13.48	1.68	4.05	7.75
8	<b>Opening CWIP</b>		378.94	113.68	113.68	151.58
	<b>Equity</b>					
	<b>Grant</b>	40%	151.58	45.47	45.47	60.63
	<b>Loans</b>	60%	227.36	68.21	68.21	90.95
9	<b>Grand Total</b>		<b>2448.77</b>	<b>311.80</b>	<b>875.50</b>	<b>1261.49</b>
	Equity		0.00	0.00	0.00	0.00
	Grant		1582.65	172.97	577.23	832.44
	Loans		852.64	137.15	294.22	421.28
	Retained Surplus / Internal Resources		13.48	1.68	4.05	7.75

## 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 5.16: Projected IDC for FY 2014-15

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15
1	Loan drawal	226.00	294.23
2	Average Loan	113.00	147.11
3	Interest Rate	13.00%	13.00%
4	<b>IDC (on average loan)</b>	<b>14.69</b>	<b>19.12</b>

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 6.15 and the weighted average interest rate as per the MYT order dated 15<sup>th</sup> March 2013 in Tariff Order for FY 2013-14. The IDC is considered on average loan for the FY 2014-15 as detailed in the Table below:

Table 5.17: Approved IDC for FY 2014-15

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	Loan drawal	226.00	294.23	294.22
2	Average Loan	113.00	147.12	147.11
3	Interest Rate	13.00%	13.00%	13.00%
4	<b>IDC (on average loan)</b>	<b>14.69</b>	<b>19.12</b>	<b>19.12</b>

The Commission approved the IDC at Rs.19.12 crore for FY 2014-15 as detailed in the Table above.

## 5.8 Gross Fixed Assets

### Petitioner's submission:

BSPTCL has projected the Gross Fixed Assets for FY 2014-15, based on the phasing of capital investment, capitalisation of CWIP and IDC as tabulated in the Table below:

**Table 5.18: Gross Fixed Assets projected for FY 2014-15**

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15
1	Opening GFA	1946.64	3833.11
2	Additions during the year	739.00	883.94
3	Interest During Construction	14.69	19.12
4	<b>Closing GFA (1+2+3)</b>	<b>2700.33</b>	<b>4736.17</b>

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 2013-14 has been considered based on the closing GFA of audited annual accounts for FY 2012-13 duly reduced to the extent of Land revalued from the value of GFA in FY 2013-14 (RE).and further updated with capex approved for FY 2013-14 (RE). The closing GFA for FY 2013-14 (RE) is adopted as opening GFA for FY 2014-15. The opening value of GFA, additions and closing GFA for FY 2014-15 is given in the Table below:

**Table 5.19: Gross Fixed Assets approved for FY 2014-15**

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	Opening GFA	1946.64	3833.11	<b>2531.27</b>
2	Additions during the year	739.00	883.94	875.50
3	Add : IDC	14.69	19.12	19.12
4	<b>Closing GFA (1+2+3)</b>	<b>2700.33</b>	<b>4736.17</b>	<b>3425.89</b>

## 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 adopted the approach considered by the Commission in Tariff Order for FY 2013-14. 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 computation 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 2014-15 as detailed in the Table below

**Table 5.20: Projected Depreciation for FY 2014-15**

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15
1	<b>Opening GFA</b>	<b>1946.64</b>	<b>3833.11</b>
2	Additions during the year	739.00	883.94
3	Add: IDC	14.69	19.12
4	Closing GFA (1+2+3)	2700.33	4736.17
5	<b>Average GFA <math>\{(1+4)/2\}</math></b>	<b>2323.49</b>	<b>4284.64</b>
6	Weighted average rate of depreciation	5.12%	5.12%
7	Depreciation (5*6)	118.96	219.37
8	Opening Grants	890.31	1667.91
9	Grants during the year	513.00	45.47
10	<b>Total Grants (8+9)</b>	<b>1403.31</b>	<b>1713.39</b>
11	Average Grants $\{(8+10)/2\}$	1146.81	1690.65
12	Weighted average rate of depreciation	5.12%	5.12%
13	Depreciation. on assets created out of grants (11*12)	58.72	86.56
14	Net Depreciation for GFA on Loans (7-13)	60.24	132.81

BSPTCL has requested the Commission to approve the computation of depreciation for FY 2014-15.

**Commission's analysis**

The Commission has examined the depreciation computations of the Petitioner. The computations of the Petitioner includes the assets (Land) revalued by Rs.1255.06 crore and also the Cost of land of Rs.47.46 crore as per the audited annual accounts of the Petitioner for FY 2012-13

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.1302.52 crore (including revaluation of Land by Rs.1255.06 crore) based on the land value reported in the audited annual accounts for FY 2012-13 and further up dated with the additions to assets for FY 2013-14 (RE). The closing GFA value of FY 2013-14 (RE) is adopted as opening GFA and further updated with the additions during the year and closing GFA arrived at for FY 2014-15.

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 5.21: Approved Depreciation for FY 2014-15

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	<b>Opening GFA</b>	<b>1946.64</b>	<b>3833.11</b>	<b>2531.27</b>
2	Additions during the year	739.00	883.94	875.50
3	Interest During Construction (IDC)	14.69	19.12	19.12
4	Closing GFA (1+2+3)	2700.33	4736.17	3425.90
5	<b>Average GFA {(1+4)/2}</b>	<b>2323.49</b>	<b>4284.64</b>	<b>2978.59</b>
6	Weighted average rate of depreciation	5.12%	5.12%	5.12%
7	Depreciation (5*6)	118.96	219.37	152.50
8	Opening Grants	890.31	1667.91	1795.41
9	Grants during the year	513.00	45.47	577.23
10	<b>Total Grants (8+9)</b>	<b>1403.31</b>	<b>1713.39</b>	<b>2372.65</b>
11	Average Grants {(8+10)/2}	1146.81	1690.65	2084.03
12	Weighted average rate of depreciation	5.12%	5.12%	5.12%
13	Depreciation on assets created out of grants (11*12)	58.72	86.56	106.70
14	<b>Net Depreciation for GFA on Loans (7-13)</b>	<b>60.24</b>	<b>132.81</b>	<b>45.80</b>

The Commission accordingly, approved depreciation of Rs.45.80 crore for FY 2014-15

## 5.10 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 1<sup>st</sup> April 2014, additions to loans considered as per funding mechanism. The Petitioner had considered the weighted average rate of interest for existing and new loans and applied on the average loan balances. BSPTCL has projected the interest on loans for FY 2014-15 as detailed in the Table below:

Table 5.22: Projected Computation of Interest on Loan for FY 2014-15

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	
1	<b>Opening loan</b>	<b>317.97</b>	<b>205.37</b>	
2	Additions during the year	226.00	294.23	
3	Repayment	60.25	132.81	
4	Closing Loan (1+2-3)	483.73	366.79	



5	<b>Average Loan <math>\{(1+4)/2\}</math></b>	<b>400.85</b>	<b>286.08</b>
6	Rate of Interest	13.00%	13.00%
7	<b>Interest Charges ( 5 * 6 )</b>	<b>52.11</b>	<b>37.19</b>

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 and finance charges projected by the Petitioner. The Petitioner has adopted the opening loan (1<sup>st</sup> April 2013) as per the annual accounts of BSPTCL for FY 2012-13 and further updated with the loan addition and repayment in FY 2013-14 (RE). The closing loan for FY 2013-14 (RE) is adopted as opening loan for FY 2014-15. The loan addition is considered based on capitalisation of CWIP and repayment is considered at par depreciation for FY 2014-15. The interest rate is considered as per the MYT period in Tariff Order dated 15<sup>th</sup> March 2013 for FY 2013-14.

The Commission has computed the interest on loans for FY 2014-15 as given in the Table below:

**Table 5.23: Approved Interest on Loan for FY 2014-15**

<b>(Rs. crore)</b>				
<b>Sl. No.</b>	<b>Particulars</b>	<b>Approved in MYT order for FY 2014-15</b>	<b>Projected by BSPTCL for FY 2014-15</b>	<b>Now approved for FY 2014-15</b>
1	<b>Opening loan</b>	<b>317.97</b>	<b>205.37</b>	<b>275.31</b>
2	Additions during the year	226.00	294.23	294.22
3	Repayment	60.25	132.81	45.80
4	Closing Loan (1+2-3)	483.73	366.79	523.72
5	<b>Average Loan <math>\{(1+4)/2\}</math></b>	<b>400.85</b>	<b>286.08</b>	<b>399.51</b>
6	Rate of Interest	13.00%	13.00%	13.00%
7	<b>Interest Charges ( 5 * 6 )</b>	<b>52.11</b>	<b>37.19</b>	<b>51.94</b>

**The Commission accordingly, approved the interest on loans of Rs.51.94 crore for FY 2014-15**

## 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 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;

(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<sub>n</sub> is the wholesale price index increase for immediate preceding year over previous year.

**Table 5.24: O&M Expenses - weightage of indexation/inflation factor**

Sl. No.	Particulars	WPI	CPI	Total
1	Weightage	0.45	0.55	1.00
2	<b>Index points for FY 2011-12</b>	<b>156.13</b>	<b>194.83</b>	
3	Indexation n-1 (index point * weightage)	70.26	107.16	177.42
4	<b>Index points for FY 2012-13</b>	<b>167.58</b>	<b>215.17</b>	
5	Indexation n (index point * weightage)	75.41	118.34	193.75
6	<b>Combined inflation {( 5-3) / 3}</b>			<b>9.21%</b>

## 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 5.25: Projected Employee Cost for FY 2014-15**

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15
1	Employee cost	176.25	145.49
2	Less: Terminal Benefits pertaining to erstwhile BSEB	81.42	42.46
3	<b>Sub-total (1-2)</b>	<b>94.83</b>	<b>103.03</b>
4	Less: Employee cost capitalised @1.80%	3.17	1.85
5	<b>Net employee cost (3 - 4)</b>	<b>91.66</b>	<b>101.18</b>

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

### Commission's analysis:

The Commission has examined the Employee cost projected by the Petitioner for FY 2014-15. The Commission considered the employee cost for FY 2014-15 based on the revised estimates of employee cost considered by the Commission for FY 2013-

14 (RE) and further increased @ 9.21% for inflationary escalation. Capitalisation of employee cost is considered @1.8% as per MYT order dated 15<sup>th</sup> March 2013 for FY 2013-14 as detailed in the Table:

**Table 5.26: Approved Employee Cost for FY 2014-15**

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	Employee cost FY 2013-14 (RE)	176.25	145.49	88.93
2	Add: indexation @ 9.21% (on sl.no.1)			8.19
3	Less: Support by State Government against terminal benefits	81.42	42.46	
4	<b>Employee cost (1+2-3)</b>	<b>94.83</b>	<b>103.03</b>	<b>97.12</b>
5	Less: Employee cost capitalised @1.80%	3.17	1.85	1.75
6	<b>Net employee cost (4 - 5)</b>	<b>91.66</b>	<b>101.18</b>	<b>95.37</b>

The Commission, accordingly, approved net employee cost of Rs. 95.37 crore for FY 2014-15 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. Huge capital expenditure schemes were undertaken to the tune of Rs. 3500 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 has estimated R&M expenses as a % of Gross Fixed Assets (GFA) and thereafter escalating by inflationary indices.

BSPTCL has projected R&M expenses @ 3% of Opening GFA and further inflationary increase @ 9.21% for FY 2014-15. The details of R&M projected by the Petitioner is as given in the Table below:

**Table 5.27: Projected Repairs and Maintenance expenses for FY 2014-15**  
(Rs. crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15
1	Opening GFA		3833.00
2	% of GFA		3.00%
3	<b>R&amp;M Cost</b>	<b>10.03</b>	<b>114.99</b>
4	Inflationary index		9.21%
5	<b>R&amp;M Cost</b>	<b>10.03</b>	<b>125.58</b>

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 15<sup>th</sup> March 2013 in Tariff Order for FY 2013-14.

The Commission has opined that new equipment do not require R&M except manpower and is normally the equipment / plant & Machinery is covered by performance guarantee and hence the request of the Petitioner for higher R&M is not considered.

The Commission considered the Repairs and Maintenance expenses for FY 2014-15 based on the revised estimates of R&M expenses considered by the Commission for FY 2013-14 (RE) with escalation at 9.21% (inflation index) as detailed in the Table:

Table 5.28: Approved R&amp;M expenses for FY 2014-15

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	Opening GFA		3833.00	
2	% of GFA		3.00%	
3	<b>R&amp;M Cost FY 2013-14 (RE)</b>	<b>10.03</b>	<b>114.99</b>	<b>14.94</b>
4	Inflationary index		9.21%	9.21%
5	<b>R&amp;M Cost</b>	<b>10.03</b>	<b>125.58</b>	<b>16.32</b>

The Commission, accordingly, considered R&M expenses at Rs.16.32 crore for FY 2014-15 as detailed in the above Table.

#### 5.14 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.14.37 crore for FY 2014-15 as furnished in the Table below:

Table 5.29: Proposed Administration and General Expenses for FY 2014-15

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15
1	<b>A &amp; G Expenses</b>	<b>5.58</b>	<b>14.59</b>
2	Less: A&G cost capitalised	0.22	0.22
3	<b>Net A&amp;G expenses</b>	<b>5.36</b>	<b>14.37</b>

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 Tariff Order for FY 2013-14.

The Commission has considered capitalisation of A&G expenses @ 4% for FY 2014-15 as per MYT order dated 15<sup>th</sup> March 2013 for FY 2013-14.

The Commission considered the Administration and General expenses for FY 2014-15 based on the revised estimates of A&G expenses considered by the Commission for FY 2013-14 (RE) with escalation at 9.21% (inflation index) as detailed in the Table:

**Table 5.30: Approved Administration & General Expenses for FY 2014-15**

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	A&G Expenses FY 2013-14 (RE)			10.80
2	Inflationary index		9.21%	9.21%
3	<b>A &amp; G Expenses</b>	<b>5.58</b>	<b>14.59</b>	<b>11.79</b>
4	Less: A&G cost capitalised	0.22	0.22	0.47
5	<b>Net A&amp;G expenses</b>	<b>5.36</b>	<b>14.37</b>	<b>11.32</b>

The Commission considers Rs.11.32 crore for FY 2013-14 (RE) towards net Administration and General Expenses.

**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 BSPGCL, 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.34.36 crore for FY 2014-15 as furnished in Table below:

**Table 5.31: Expenses of Holding Company for FY 2014-15**

Particulars	(Rs. Crore)				
	BSPGCL	BSPTCL	NBPDC	SBPDCL	Total
Employee cost	1.40	3.84	7.03	10.77	23.04
R&M expenses	0.17	0.12	0.12	0.20	0.61
A&G Expenses	2.99	2.04	2.09	3.59	10.71
<b>Total</b>	<b>4.56</b>	<b>6.00</b>	<b>9.24</b>	<b>14.56</b>	<b>34.36</b>



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

#### Commission's analysis:

The Commission has examined the allocation of Holding Company expenses incurred towards Employee cost, Administration and General Expenses and O&M expenses and considered the allocation in terms of Bihar State Electricity Reforms Transfer Scheme, 2012 for FY 2013-14 (RE) as detailed in the Table below:

**Table 5.32: Allocation of Expenses of Holding Company approved for FY 2014-15**  
(Rs. crore)

Particulars	BSPGCL	BSPTCL	NBPDCL	SBPDCL	Total
Employee cost	1.40	3.84	7.03	10.77	23.04
R&M expenses	0.17	0.12	0.12	0.20	0.61
A&G Expenses	2.99	2.04	2.09	3.59	10.71
<b>Total</b>	<b>4.56</b>	<b>6.00</b>	<b>9.24</b>	<b>14.56</b>	<b>34.36</b>

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

**Table 5.33: Total O&M cost considered by the Commission for FY 2014-15**  
(Rs. crore)

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	Employee cost	91.66	101.18	97.12
2	R&M expenses	10.03	125.58	16.32
3	A&G Expenses	5.36	14.37	11.79
4	Holding company expenses allocated		6.00	6.00
5	<b>Total O&amp; M cost</b>	<b>107.05</b>	<b>247.13</b>	<b>131.23</b>
6	Less: O&M expenses capitalised	3.39	2.07	2.22
7	<b>Net O&amp;M expenses</b>	<b>103.66</b>	<b>245.06</b>	<b>129.01</b>

The Commission considered total net O&M cost of Rs.129.01 crore for FY 2014-15

## 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 5.34: 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 <sup>st</sup> April of the year

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

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

**Table 5.35: Projected Interest on working capital for FY 2014-15**

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15
1	O&M exp. (1 month)	8.92	20.59
2	Maintenance spares @1% of opening GFA with 6% escalation	20.63	40.63
3	Receivables - 2 months	43.98	114.80
4	Total working capital	73.53	176.03
5	Rate of interest	14.45%	14.45%
6	Interest on working capital	10.63	25.44

The Petitioner has requested to approve the computation of interest on working capital and the interest charges thereon for FY 2014-15.

### 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 1<sup>st</sup> April 2013.

The Commission has computed the working capital and interest on working capital for FY 2014-15 as per expenses approved at SBI PLR interest rate of 14.45% as on 1<sup>st</sup> April'2013 as given in the Table below:

**Table 5.36: Approved Interest on working capital for FY 2014-15**

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	O&M (Gross) exp. (1 month)	8.92	20.59	10.94
2	Maintenance spares @1% of opening GFA with 6% escalation	20.63	40.63	26.83
3	Receivables - 2 months	43.98	114.80	45.10
4	Total working capital	73.53	176.03	82.87
5	Rate of interest	14.45%	14.45%	14.45%
6	<b>Interest on working capital</b>	<b>10.63</b>	<b>25.44</b>	<b>11.97</b>

**The Commission approved the interest on working capital at Rs.11.97 crore for FY 2014-15.**

### 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 2012-13. During the process of restructuring, the equity component has got re-valued and the Petitioner request Hon'ble Commission to consider the same figures for ARR purpose. The Petitioner submitted that equity capital is excluding revaluation of reserves and subsidies and is claimed as per Regulation 72 (2) of BERC Tariff Regulations 2007.

BSPTCL has submitted that Section 131 of the Electricity Act, 2003 provides that any pursuance to transfer scheme shall be binding on all persons. Section 131 of the Electricity Act, 2003 is reproduced hereunder:

*Notwithstanding anything contained in this section, where; (b) a transaction of any description is effected in pursuance of a transfer scheme, it shall be binding on all persons including third parties and even if such persons or third parties have not consented to it.*

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

**Table 5.37: Projected Return on Equity for FY 2014-15**

(Rs. crore)			
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15
1	Equity	235.00	1758.96
2	Add: Equity During the year		544.24
3	Closing equity balance (1+2)	235.00	2303.20
4	Average equity $\{(1+3)/2\}$	235.00	2031.08
5	Rate of Return per annum %	14.00%	14.00%
6	<b>Return on Equity - Opening Equity</b>	<b>32.90</b>	<b>246.25</b>

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

**Commission’s analysis**

The Commission has examined the computation of Return on Equity (RoE) claim of BSPTCL. The Petitioner has computed RoE on the enhanced Equity. It was stated that during the process of restructuring the equity component has got re-valued. It was reported by the Petitioner that finalization/approval of State Government to the final transfer scheme is in process. Hence, the Commission has not considered the enhanced equity in view of specific orders from the State Government.

Regulation 73 (2) (c) of the BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007, specifies that,

***“Return on Equity shall be computed on the equity base determined in accordance with Regulation 71 and shall be @ 14% per annum”.***

Regulation 71 (1) specifies that;

- (a) In case of all projects, the Debt : Equity ratio as on the date of commercial operation shall be 70 : 30 for determination of tariffs.***
- (b) However, the Commission may consider equity higher than 30% if satisfied that the higher equity deployed is in the interest of the general public.***
- (c) Further, if the equity employed is less than 30%, the actual Debt and Equity shall be considered for determination of tariff.***
- (d) It is also specified that in case of existing projects the actual Debt : Equity ratio shall be used for tariff determination.***
- (e) The Debt and Equity amount arrived as above, shall be used for calculation of Interest on Loan, Return on Equity, etc.***

However, in view of the data constraints with respect to capex vis-à-vis source of funding, ., the Commission has considered the methodology adopted in MYT order dated 15<sup>th</sup> March 2013 in the Tariff Order for FY 2013-14 for computation of Interest on Loan and Return on Equity for FY 2013-14 (RE). The funding of capitalisation of capex is considered as discussed under Capital Expenditure.

Accordingly, the Commission has considered equity at Rs.235 crore considered for MYT period in the Tariff Order dated 15<sup>th</sup> March 2013 for FY 2013-14. The rate of return on equity has been considered @14% as per the BERC Tariff Regulations. The Return on Equity considered by the Commission is as detailed in the Table below:

**Table 5.38: Approved Return on Equity for FY 2014-15**

(Rs. crore)				
Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	Equity	235.00	1758.96	235.00
2	Add: Equity During the year		544.24	
3	Closing equity balance (1+2)	235.00	2303.20	235.00
4	Average equity $\{(1+3)/2\}$	235.00	2031.08	235.00
5	Rate of Return per annum %	14.00%	14.00%	14.00%
6	<b>Return on Equity - Opening Equity</b>	<b>32.90</b>	<b>246.25</b>	<b>32.90</b>

The Commission approves the Return on Equity at Rs.32.90 crore for FY 2014-15 as detailed in the Table above.

#### 5.19 Non-Tariff Income

##### **Petitioner's submission:**

BSPTCL has submitted that in the absence of actual data for entire financial year, has proposed Rs.1.02 crore for FY 2014-15 and requested the Commission to approve the Non-tariff income for FY 2014-15

##### **Commission's analysis:**

The Commission in its Tariff order dated 15<sup>th</sup> March 2013 has approved Non-tariff income of Rs.0.61 crore for the year 2014-15 for Transmission function.

The Commission considered the submission of the Petitioner and the non-tariff income of Rs.1.02 crore for FY 2014-15 is approved.

#### 5.20 Annual Fixed Cost / ARR for FY 2014-15

##### **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 2014-15 in the MYT order 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	Projected by BSPTCL for FY 2014-15
1	O&M expenses (Gross)	107.05	247.12
2	Employee cost	91.66	101.18
3	R&M expenses	10.03	125.58
4	A&G Expenses	5.36	14.37
5	Holding company expenses allocated	0.00	6.00
6	Interest and finance charges	52.11	37.19
7	Interest on working capital	10.63	25.44
8	Depreciation	60.25	132.81
9	Return on Equity	32.90	246.25
<b>10</b>	<b>Total Fixed cost</b>	<b>262.93</b>	<b>688.82</b>
11	Less: Non-tariff income	0.61	1.02
<b>12</b>	<b>Net Fixed cost / ARR</b>	<b>262.32</b>	<b>687.79</b>

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 dt.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.

#### Commission's analysis:

Based on the Commission's detailed analysis, the Aggregate Revenue Requirement / annual fixed cost considered by the Commission for FY 2014-15 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	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	<b>O&amp;M expenses</b>	<b>107.05</b>	<b>247.12</b>	<b>129.01</b>
2	Employee cost	91.66	101.18	97.12
3	R&M expenses	10.03	125.58	16.32
4	A&G Expenses	5.36	14.37	11.79
5	Holding company expenses allocated	0.00	6.00	6.00
6	<b>Less: O&amp;M expenses capitalised</b>			2.22
7	Interest and finance charges	52.11	37.19	51.94
8	Interest on working capital	10.63	25.44	11.97
9	Depreciation	60.25	132.81	45.80
10	Return on Equity	32.90	246.25	32.90
<b>11</b>	<b>Total Fixed cost</b>	<b>262.93</b>	<b>688.82</b>	<b>271.62</b>
12	Less: Non-tariff income	0.61	1.02	1.02
<b>13</b>	<b>Net Fixed cost / ARR</b>	<b>262.32</b>	<b>687.79</b>	<b>270.60</b>

## 5.21 Revenue Gap / (Surplus) for FY 2014-15

### 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 for FY 2013-14. The Petitioner has submitted the transmission charges as per revised projections in the Table below:

Table 5.41: Projected 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
1	Annual Transmission charges	262.32	687.79
2	Transmission cost to be realized per month from Distribution Companies	21.86	57.32

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



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

(Rs. Crore)			
Sl. No.	Particulars	Approved in MYT for FY 2014-15	Projected by BSPTCL for FY 2014-15
1	Revised ARR for FY 2014-15	262.32	687.79
2	<b>Less:</b> Approved Annual Transmission Charges for FY 2014-15	262.32	262.32
3	<b>Revenue Gap / (Surplus) for FY 2014-15 (1-2)</b>	<b>0.00</b>	<b>425.47</b>

BSPTCL has requested the Commission to approve the transmission charges and revenue gap for FY 2014-15 as detailed above.

#### Commission's analysis:

Based on the Commission's detailed analysis of the projections made by the Petitioner, the Commission has arrived at net charges of Rs. 8.28 crore for FY 2014-15 as detailed in the Table below:

Table 5.43: Approved Revenue Gap / (Surplus) for FY 2014-15

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	Aggregate Revenue Requirement for FY 2014-15	262.32	687.79	270.60
2	<b>Less:</b> Approved Annual Transmission Charges for FY 2014-15 in tariff order for FY 2013-14	262.32	262.32	262.32
3	<b>Revenue Gap / (Surplus) for FY 2014-15 (1-2)</b>	<b>0.00</b>	<b>425.47</b>	<b>8.28</b>

Accordingly, the Commission has considered the expenditure of Rs.270.60 crore for recovery from Distribution licensees for FY 2014-15.

#### 5.22 Approved Transmission Charges for FY 2014-15

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

**Table 5.44: Approved 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	Now approved for FY 2014-15
1	Annual Transmission charges	262.32	687.79	270.60
2	Transmission charges to be realized per month from Distribution Companies	21.86	57.32	22.55

The transmission charges approved above for FY 2014-15 shall be fully realized from the Distribution Companies on monthly basis in proportion of power delivered to the Distribution Companies.

Sl. No.	Particulars	Approved in MYT order for FY 2014-15	Projected by BSPTCL for FY 2014-15	Now approved for FY 2014-15
1	Annual Transmission charges	262.32	687.79	270.60
2	Total Power Purchases	23344	21883	21154
3	Less: Bilateral/UI sales	6775	1765	4908
4	Net Power Purchases (2-3)	16569	20118	16246
5	Transmission charges per kWh ((1/4)*10)	0.16	0.34	0.17

Transmission charges per unit works out to Rs. 0.17 and is representative purpose only and not for billing on the basis of actual energy.

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## 6. Directives

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### 6.1 General

It is observed from the petition filed by BSPTCL for review of the ARR for FY 2013-14 and determination of revised ARR and Tariff for FY 2014-15 there are some issues which need immediate attention of BSPTCL. In this context, the Commission considered it necessary to issue the following directives to BSPTCL.

### 6.2 Directives

#### **Directive 1: Transmission loss:**

BSPTCL has requested to approve Transmission loss of 4.05% for all years of the control period i.e. from FY 2013-14 to FY 2015-16. The Commission has approved the Transmission loss reduction trajectory of 4.02% for FY 2013-14, 3.97% for FY 2014-15 and 3.92% for FY 2015-16 BSPTCL has not furnished details such as the energy outgo at various interface points of DISCOM to compute the 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.

#### **Directive 2: Separate ARR for SLDC**

The Commission has directed BSPTCL to file ARR for FY 2014-15 separately for transmission and SLDC businesses vide letter dated 30.01.2014.

BSPTCL 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 Govt.
- 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 directs 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 30<sup>th</sup> June 2014.

**Bihar Electricity Regulatory Commission (BERC)**

**Proceedings of State Advisory Committee (SAC) meeting held on 23.01.2014 at**

**11:30 A.M. in BERC Office.**

1. At the outset, Sri U.N. Panjiar, Chairman BERC and Chairman SAC welcomed all the participants. The list of participants is annexed.

Chairman, BERC and SAC informed the Committee that Bihar State Power (Holding) Company Limited (BSPHCL) has submitted the petition for True up of FY 2012-13 on behalf of erstwhile Bihar State Electricity Board (BSEB) and unbundled entities Bihar State Power Generation Company Ltd. (BSPGCL), Bihar State Power Transmission Company Ltd. (BSPTCL), North Bihar Power Distribution Company Ltd. (NBPDCCL) and South Bihar Power Distribution Company Ltd. (SBPDCL). Also the four subsidiary companies of BSPHCL i.e. BSPGCL, BSPTCL, NBPDCCL and SBPDCL have filed separate petitions for Annual Performance Review (APR) for FY 2013-14, revised Annual Revenue Requirement (ARR) and Tariff for FY 2014-15. The suggestions/objections on the petitions have been invited from the stakeholders and general public through notices in newspapers and website of the respective companies. Public hearing has also been held so far at Bhagalpur, Munger, Patna, Saharsa, Purnea, Darbhanga and Muzaffarpur. Public hearing is also scheduled at Chapra, Gaya and Patna during the month of February, 2014.

This meeting of State Advisory Committee was called to discuss and seek the advice and suggestions from the members.

2. Sri S.K. Singh, C.E (Comml.) NBPDCCL welcomed the members of SAC and made a power point presentation giving the summary of true up, APR, ARR and Tariff petitions.
3. During the presentation, Chairman made the following observations and representatives of the company gave the following clarifications:-
  - 3.1 **Transmission & Distribution (T&D) Losses-** Actual T&D loss reported by BSPHCL during the FY 12-13 is 45.49% against approved loss of 27.50%. In the previous tariff

orders, a trajectory was given to reduce the T&D losses in a phased manner. Therefore, the high T&D losses in excess of approved levels are not justified.

- 3.2** Shri N. K. Jha, DGM (F), BSPHCL clarified that equity and return on equity figures based on accounts and other are based on the revaluation of the assets by Power Finance Corporation (PFC) submitted to the State Government and not on the actual equity infused and approved by the Government and other figures are based on accounts. He also clarified that the accounts have been audited by the statutory auditors, the Accountant General but are still to be certified by the A.G.
- 3.3** During the presentation of Transmission Company, Chairman asked for the availability factor of the transmission lines. C.E (Comml.) NBPDCCL assured that he will revert back on this issue.
- 3.4** R&M expenses of BSPTCL for FY 2013-14 were projected as Rs. 115.10 crore. The chairman asked the actual expenditure accrued till December, 2013. It was informed that actual expenditure up to December, 2013 was Rs. 20 crore. On this Chairman said that the figure of Rs. 115 crore is not realistic consider the progress made so far and the capacity to spend.
- 4.** Suggestions by other members of the SAC:-
- 4.1** Shri Sanjay Bharatiya, Secretary General Bihar Industries Association raised the following points:
- 4.1.1** BSPHCL has claimed Rs. 745.87 crore as prior period charges. As a matter of fact there should not be any prior period charges as the truing up exercise for FY 2011-12 has already been completed and the account for the year 2011-12 has already been closed. So it was not proper for the petitioner to again claim prior period charge in FY 2012-13.
- 4.1.2** It was the responsibility of BSPHCL to finalize the transfer scheme within one year of issue of the provisional transfer scheme in November, 2012. Since the final transfer scheme has not been notified so far, the provisional scheme has to be treated as final.
- 4.1.3** Additional petitions for capitalization of transmission assets should not be entertained as hearing has already been completed.

- 4.1.4** The BSPHCL has claimed Rs. 220.74 crore as RoE. In this context it was stated that the equity approved by the state government in the successor companies after reorganization of erstwhile BSEB has already been approved by the state government in the provisional transfer scheme which has not yet been revised and therefore, has become final after November, 2013. There was also no additional equity infusion by the state government in the successor companies. For allowing RoE there had to be actual infusion of equity and it cannot be allowed on the basis of expected equity.
- 4.2** Shri A. K. P. Sinha, Bihar Chamber of Commerce & Industries observed that there has been decrease in average cost of power purchase during FY 2012-13. It was suggested to determine the FPPCA for the FY 2012-13 on the basis of data supplied by the petitioner licensees as in the previous year's tariff order, it is mentioned that "variation of FPPCA charges will be allowed only when it is five (5) paise or more per unit".
- 4.3** Shri S. K. Patwari, Vice President, BCCI suggested that the actual annual fixed charge may be ascertained by the Commission and fixed charges for different categories of consumers may be determined on that basis.
- 4.3.1** Demand charge should be in proportion to hours of supply given to consumers.
- 4.4** Shri Umesh Poddar of BIA suggested that T&D loss is very high. All efforts may be made to minimize this loss.
- 4.4.1** He also suggested that MMC may be abolished for all categories of consumers.
- 4.4.2** It was suggested that DT wise regulation of power can be done for the area from where revenue collection is low.
- 4.5** Shri S. K. P. Singh, C.E (Comml.) SBPDCL raised the following issues and sought the direction of the Commission:
- 4.5.1** There is a provision in the supply code that in case a meter becomes defective, the consumer has to be billed on the basis of average consumption of previous three months. However, in the tariff order for FY 2013-14, it is mentioned that consumption will be assed and billed on an average consumption of last 12 months from the date of meter going out of order. Thus there are two contradictory provisions. It was suggested that this is to be taken care of in next tariff order.

**4.5.2** Sri. S.K.P. Singh further mentioned that there are two different demand charges for induction furnace in the tariff order 2013-14. One tariff for existing furnaces for which contract demand will be determined on the basis of 600 KVA per metric tone. However for new connection and if furnace is replaced with a new one for the existing connections, the contract demand shall be based on total capacity of the furnace and equipment as per manufacturer technical specifications, and in case of difference of opinion, the provision of Bihar Electricity supply Code (Clause 6.39 & 6.40) shall apply.

**4.6** Sri Vikram Singh, Vice President, Indian Energy Exchange raised the following issues:

**4.6.1** In the present UI regime when under drawl is also penalised, the role of State Load Despatch Centre (SLDC) has increased manifold. Hence there should be separate manpower earmarked for the SLDC and it should be strengthened. Also out of total ARR of Transmission Company, certain amount may be earmarked for SLDC as separate ARR.

**4.6.2** In Renewable Purchase Obligation (RPO), carry forward should not be allowed.

**4.7** Sri. N.K. Jha, Dy. Chief Electrical Engineer, E.C. Railway, Hajipur raised the following issues:-

**4.7.1** Billing demand is more than the actual demand. Shri Vikram Singh of IEE informed that in some other states maximum instantaneous demand is considered as contract demand. Shri Jha requested the Chairman to consider sympathetically while fixing the tariff for Railway traction.

The meeting ended with a vote of thanks to all the participants for taking active part in discussions and suggestions.



**List of Participants who attended the meeting of State Advisory Committee  
Held on 23<sup>rd</sup> January, 2014 In BERC office at Patna**

Sl.No.	Name	Designation	Organisation
1.	Shri U.N. Panjiar	Chairman	BERC
2.	Shri S.C. Jha	Member	BERC
3.	Shri Sanjay Kr. Agrawal	Managing Director	NBPDCL
4.	Shri S.K.P. Singh	Chief Engineer (Com)	SBPDCL
5.	Shri Vijay Kumar	FCI	NBPDCL
6.	Shri N. K. Jha	DGM	BSPHCL
7.	Shri Arvind Kumar	DGM (F)	BSPHCL
8.	Shri Arun Agrawal	President	BIA
9.	Shri Umesh Kr. Poddar	Energy Sub-Committee	BIA
10.	Shri A.K.P. Sinha	Sec. General,	Bihar Chamber of Commerce
11.	Shri S.K. Patwari	Vice-president	BCCI
12.	Shri Sanjay Bhartiya	Secretary General	BIA
13.	Shri Nadeem Ahmad	EEE/Com.	SBPDCL
14.	Shri D.N.Pandey	Director	BREDA
15. S	Shri N. K. Jha	Dy. Chief Elec. Eng.	E.C. Railway, Hajipur
16.	Shri Surya Sekhar Panda	Regional Manager	Indian Energy Exchange Ltd.
17.	Shri Bikram Singh	Vice-president	Indian Energy Exchange Ltd.
18.	Shri S. K. Singh	C.E/Com	NBPDCL
19.	Shri R.C. Singh	ESE (Com)	SBPDCL
20.	Shri Jayant Kumar Dubey	EEE (Com)	NBPDCL
21.	Prabhat Kumar	Sr. SB/TRD/DMR	ECR, Hajipur
22.	Shri Parmanand Singh	Secretary	BERC
23.	Shri Ganesh Prasad	Consultant	BERC
24.	Shri R. P. Kanth	Consultant	BERC
25.	Shri P. Ranjan	Consultant	BERC
26.	Shri Lakshman Bhakta	Dy. Director	BERC
27.	Shri Jayesh Chauhan	Tariff consultant	BSPHCL
28.	Shri Souvik Das	Consultant	ASCI, Hyderabad

**ANNEXURE-II****1. List of consumers/consumer organizations who filed their objections:**

- i) M/s Kalyanpur Cements Ltd., Patna
- ii) M/s Bihar Chamber of Commerce & Industries, Patna

**2. List of Objectors/Stakeholders and Others who have participated in the Public Hearing :**

Sl. No.	Name	Designation	Organization
<b>On Behalf of Board</b>			
1	Yugal Kishore Thakur	Chief Engineer (Transmission),	BSPTCL
2	Rakesh	EEE (Transmission)	BSPTCL
3	Rajiv Ranjan Singh	Sr. Manager (F&A)	BSPTCL
4	Gautam Kr. Chaubey	ESE (SLDC)	BSPTCL
5	Suryakant Prasad Chaudhary	EEE (Trans.) O&M	BSPTCL
6	Pramod Tiwari	DGM (F&A)	BSPTCL
7	S.K. Singh	Chief Engineer (Commercial)	NBPDCL
8	Manish Shakya	AEE (Commercial)	NBPDCL
9	Neeraj Verma	Consultant, Feedbackinfra	BSPTCL
10	Jayesh Chauhan	Consultant, Feedbackinfra	BSPTCL
<b>On Behalf of Consumers/Consumer Organisation</b>			
11	Sanjay Kumar Bhartiya	General Secretary	Bihar Industries Association
12	S.K. Patwari	Vice- President	Bihar Chamber of Commerce
13	Umesh Kumar Poddar	Chairman	Bihar Industries Association
14	Doman Singh	Consumer	-
<b>On Behalf Of Commission</b>			
15	Parmanand Singh	Secretary	BERC
16	Lakshman Bhakt	Dy. Secretary	BERC
17	Ganesh Prasad	Consultant	BERC
17	Nand Sharma	Consultant	BERC
18	Priya Ranjan	Consultant	BERC
19	R.P. Kanth	Consultant (Finance)	BERC
20	Sanjeev Kumar Singh	Dy. Director (Finance)	BERC