



BEFORE

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

Petition

For

**Truing-up for FY 2018-19, Annual Performance Review for FY 2019-20 and
Aggregate Revenue Requirement and SLDC operating charges for FY 2020-21**

For

State Load Despatch Centre (SLDC)

Under

Bihar State Power Transmission Company Limited

Patna



Chief Engineer (System Operations)

4th Floor, Vidyut Bhawan-1

Jawaharlal Nehru Marg

Patna - 800 021

15 November, 2019



Before the Bihar Electricity Regulatory Commission
Patna, Bihar

Filing No.:

Case No.:

IN THE MATTER OF **Filing of Petition for State Load Despatch Centre (SLDC) under Bihar State Power Transmission Company Limited for approval of Truing-up of FY 2018-19, Annual Performance Review of FY 2019-20 and Aggregate Revenue Requirement and SLDC operating charges of FY 2020-21 under BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 and BERC (Multi-Year Transmission Tariff and SLDC Charges) Regulations, 2018 along with the other guidelines and directions issued by the BERC from time to time and under Sections 45, 46, 47, 61, 62, 64 and 86 of The Electricity Act 2003 read with the relevant guidelines.**

AND

IN THE MATTER OF **State Load Despatch Centre (SLDC) under Bihar State Power Transmission Company Limited (herein after referred to as 'SLDC' or 'Petitioner')** which shall mean for the purpose of this Petition, the SLDC in the State of Bihar, having its registered office at Vidyut Bhawan -I, Jawaharlal Nehru Marg, Patna - 800 021

The Petitioner respectfully submits as under:

1. Pursuant to the enactment of the Electricity Act, 2003, State Load Despatch Centre (hereinafter referred to as SLDC) is filing this Petition for Truing-up of FY 2018-19, Annual Performance Review of FY 2019-20, and determination of Aggregate Revenue Requirement and SLDC operating charges for FY 2020-21



as per procedures outlined in the governing Regulations thereof.

2. The Multi-year Tariff (MYT) Petition for the Control Period from FY 2013-14 to FY 2015-16 was filed on 14.11.2012 by BSPHCL on behalf of all successor Companies and accordingly, the Hon'ble Commission had issued common Order for all entities (Tariff Order dated March 15, 2013).
3. The Hon'ble Commission in the MYT Order dated 21 March, 2016, had directed SLDC to file separate Petition for Determination of Aggregate Revenue Requirement.
4. In compliance of the BERC Regulations and Directives, BSPTCL for the first time filed separate Petition for ARR of FY 2017-18 for SLDC function on November 30, 2016 and the Hon'ble Commission issued Order on the same on March 9, 2017.
5. BSPTCL filed Petition for ARR of FY 2018-19 for SLDC function on November 15, 2017 and the Hon'ble Commission issued Order on the same on March 7, 2018.
6. BSPTCL filed Petition for ARR of FY 2019-20 up to 2021-22 for SLDC function on November 28, 2017 and the Hon'ble Commission issued Order on the same on February 15, 2019.
7. The present Petition is being filed before the Hon'ble Commission for Trueing-up of FY 2018-19, Annual Performance Review of FY 2019-20 and Determination of Annual Revenue Requirement (ARR) and SLDC operating charges for FY 2020-21.
8. This present Petition is filed on independent basis and has been prepared in accordance with the provisions of Multi-Year Tariff of the BERC (Terms and Conditions for Determination of Tariff) Regulations, 2007 and BERC (Multi-Year Transmission Tariff and SLDC Charges) Regulations, 2018 along with the other guidelines and directions issued by the Hon'ble Commission from time to time and under Sections 45, 46, 47, 61, 62, 64 and 86 of The Electricity Act



2003 read with the relevant guidelines.as amended from time to time by the Hon'ble Commission.

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



Table of Contents

1	Introduction	10
1.1	Background	10
1.2	Constitution of State Load Despatch Centre	10
1.3	Functions of State Load Despatch Centre.....	10
1.4	SLDC Charges.....	11
1.5	Approach to the Present Filing.....	12
1.6	Structure of the Petition.....	13
2	Truing up for FY 2018-19	14
2.1	Introduction	14
2.2	Operation and Maintenance expenses	14
2.2.1	Employee Expenses	15
2.2.2	Repairs and Maintenance Expenses (R&M).....	15
2.2.3	Administration and General Expenses (A&G).....	16
2.3	Interest on working capital	17
2.4	Non-Tariff Income.....	18
2.5	Aggregate Revenue Requirement for FY 2018-19.....	18
2.6	Revenue Gap / (Surplus) for FY 2018-19.....	19
3	Annual Performance Review for 2019-20.....	20
3.1	Introduction	20
3.2	Capital Investment Plan.....	20
3.2.1	SAMAST (Scheduling, Metering and Settlement of Transmission in Electricity)	21
3.3	Operation and Maintenance (O&M) Expenses	23
3.3.1	Employee Expenses	23
3.3.2	Repair and Maintenance (R&M) Expenses	24
3.3.3	Administrative and General Expenses (A&G)	25
3.3.4	Summary of Operation and Maintenance (O&M) Expenses.....	26



7.3	Directive 3: Implementation of Scheduling, Accounting, Metering and Settlement of Transactions in Electricity (SAMAST)	47
7.4	Directive 4: Asset Register	48
7.5	Directive 5: Ring Fencing of SLDC	49



Table 5-2: Annual SLDC Operating Charges for FY 2020-21 (Rs. Crore).....43

LIST OF ABBREVIATIONS

A&G	Administrative & General
R&M	Repair & Maintenance
O&M	Operation & Maintenance
ARR	Aggregate Revenue Requirement
CEA	Central Electricity Authority
EA	Electricity Act
GFA	Gross Fixed Asset
IoWC	Interest on Working Capital
MU	Million Units
MW	Mega Watt
MVA	Mega Volt Ampere
MYT	Multi Year Tariff
STOA	Short Term Open Access



1 Introduction

1.1 Background

1. The erstwhile Bihar State Electricity Board (“Board” or “BSEB”) originally constituted on 1st April 1958 under Section 5 of the Electricity (Supply) Act, 1948, was engaged in the management of electricity generation, transmission, distribution and related activities in the State of Bihar.
2. Under the ‘Bihar State Electricity Reforms Transfer Scheme 2012’, the BSEB has been unbundled into five Companies: Bihar State Power (Holding) Company Limited (BSPHCL), Bihar State Power Transmission Company Limited (BSPTCL), Bihar State Power Generation Company Limited (BSPGCL), South Bihar Power Distribution Company Limited (SBPDCL) and North Bihar Power Distribution Company Limited (NBPDC) with effect from 1st November 2012 vide Notification No. 17 dated 30.10.2012.

1.2 Constitution of State Load Despatch Centre

Section 31 of the Electricity Act, 2003, provides for constitution of State Load Despatch Centre (SLDC), as under:

“31. (1) The State Government shall establish a Centre to be known as the State Load Despatch Centre for the purposes of exercising the powers and discharging the functions under this Part.

(2) The State Load Despatch Centre shall be operated by a Government company or any authority or corporation established or constituted by or under any State Act, as may be notified by the State Government.

Provided that until a Government company or any authority or corporation is notified by the State Government, the State Transmission Utility shall operate the State Load Despatch Centre:

Provided further that no State Load Despatch Centre shall engage in the business of trading in electricity.”

1.3 Functions of State Load Despatch Centre

The functions of SLDC as envisaged in the Electricity Act, 2003, are as under:



“32. (1) The State Load Despatch Centre shall be the apex body to ensure integrated operation of the power system in a State.

(2) The State Load Despatch Centre shall

- a) be responsible for optimum scheduling and despatch of electricity within a State, in accordance with the contracts entered into with the licensees or the generating companies operating in that State;*
- b) Monitor grid operations;*
- c) Keep accounts of the quantity of electricity transmitted through the State grid;*
- d) Exercise supervision and control over the intra-state transmission system; and*
- e) be responsible for carrying out real time operations for grid control and despatch of electricity within the State through secure and economic operation of the State grid in accordance with the Grid Standards and the State Grid Code.*

(3) The State Load Despatch Centre may levy and collect such fee and charges from the generating companies and licensees engaged in intra-State transmission of electricity as may be specified by the State Commission.”

1.4 SLDC Charges

The Petitioner submits that the assets of SLDC are not owned by BSPTCL. The same are owned by PGCIL, which in-turn recovers cost from the Distribution Companies namely, South Bihar Distribution Company Private Limited (SBPDCL) and North Bihar Distribution Company Private Limited (NBPDCIL). The supporting documents, i.e., the Minutes of the Meeting of ERPC meeting where it was decided that the SLDC assets will be created by PGCIL have already been submitted to the Hon'ble Commission with the Tariff Petition for FY 2017-18 dated 30 November, 2016.

However, day-to-day operations of SLDC are managed by BSPTCL and for the same, separate accounts are being maintained. Therefore, in view of the facts explained above and Provision of Section 31 (1), (2) and 1st Proviso of Section 31(2) of the Electricity Act, 2003, operations of SLDC are just and proper. A separate Petition for determining Aggregate Revenue Requirement is being submitted based on expenses incurred in operationalisation of SLDC.



1.5 Approach to the Present Filing

Regulations 4.1 and 4.2 of BERC (Multi Year Transmission Tariff and SLDC Charges) Regulations, 2018 (BERC MYT Regulations, 2018) specifies the basis on which the Hon'ble Commission shall determine tariff for transmission and SLDC business for each year of the Control Period. The relevant extract is as follows.

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

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

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

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

ii. A detailed Business Plan based on the Operational Norms and trajectories of performance parameters specified in the MYT Regulations, for each year of the Control Period, shall be submitted by the applicant for the Commission's approval subject to provisions under these Regulations;

iii. Based on the Business Plan, the applicant shall submit a petition with the forecast of Aggregate Revenue Requirement and expected revenue from existing tariff and charges for each year of the Control Period, and the Commission shall approve the transmission tariff and Fees and Charges in case of SLDC for each year of the Control Period;

iv. The mechanism for pass-through of approved gains or losses on account of uncontrollable factors as specified under Regulation 9 of these Regulations;

v. The mechanism for sharing of approved gains or losses arising out of controllable factors as specified under Regulation 10 of these Regulations;



The application to be filed before the Hon'ble Commission for determination of tariff is as per Regulation 11.3 of BERC MYT Regulations, 2018. The relevant extracts are as follows:

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

The Hon'ble Commission vide Tariff Order dated 15th February 2019 approved the Truing-up of FY 2017-18, Annual Performance Review (APR) of FY 2018-19 and Aggregate Revenue Requirement (ARR) for SLDC for the Multi-Year Tariff period from FY 2019-20 to FY 2021-22, and determined the SLDC operating charges for FY 2019-20.

In accordance with the above provisions of BERC MYT Regulations, 2018, SLDC is filing the present Petition for Truing-up of FY 2018-19 based on audited accounts of FY 2018-19, APR of FY 2019-20 based on half year actuals and half year estimates of FY 2019-20, and determination of revised ARR and SLDC Operating Charges for FY 2020-21.

1.6 Structure of the Petition

The Petition consists of the following Chapters as outlined below:

Chapter 1: Introduction (Present Chapter)

Chapter 2: Truing up for FY 2018-19

Chapter 3: Annual Performance Review of FY 2019-20

Chapter 4: Revised Aggregate Revenue Requirement for FY 2020-21

Chapter 5: SLDC Operating Charges

Chapter 6: Prayers

Chapter 7: Compliance of Directives



2 Truing up for FY 2018-19

2.1 Introduction

SLDC has filed Truing-up Petition for FY 2018-19 based on the Trial Balance for FY 2018-19. SLDC has considered the values approved in ARR of FY 2018-19 vide Tariff Order dated 7th March 2018 vis-à-vis values as per Trial Balance of FY 2018-19. The Truing-up of FY 2018-19 is carried out in accordance with relevant provisions of BERC Tariff Regulations, 2007.

Regulation 22 (1) and (2) of the BERC Tariff Regulations, 2007 specifies as under:

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

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

Accordingly, SLDC has proposed Truing-up for FY 2018-19 based on the Trial Balance for FY 2018-19. A copy of the audited accounts of BSPTCL and Trial Balance of SLDC for FY 2018-19 are attached as **Annexure I**. It may be noted that the expenses considered under SLDC have been deducted from the expenses claimed by BSPTCL’s transmission business in the true-up for FY 2018-19.

2.2 Operation and Maintenance expenses

Strengthening of SLDC is taking place and long-term projects like SAMAST are being executed, which will give robust infrastructure to the SLDC. The O&M cost has also been higher on this account.



2.2.1 Employee Expenses

The Petitioner submits that employee expenses primarily include costs towards salaries, dearness allowances, medical expense reimbursement, other allowances, staff welfare expenses and terminal benefits. As per audited accounts of FY 2018-19, SLDC has incurred Rs.4.07 Crore towards Employee Expenses in FY 2018-19. The Employee Expenses for the year increased due to preparation and execution of the SAMAST project, which will strengthen the SLDC on various aspects.

As per Regulation 22 (2) of BERC Tariff Regulations, 2007, SLDC has claimed the expenses as reflecting in audited accounts of FY 2018-19. The following Table shows the employee expenses considered in Truing-up of FY 2018-19:

Table 2-1: Employee expenses for FY 2018-19 (Rs. Crore)

Sl. No	Particulars	FY 2018-19	
		Approved in Tariff Order dated 07.03.2018	Claimed in Truing-up of FY 2018-19
1	Employee cost as per audited accounts	3.23	4.06

The Hon'ble Commission is requested to approve Employee Cost of Rs. 4.06 Crore in Truing-up of FY 2018-19

2.2.2 Repairs and Maintenance Expenses (R&M)

The Petitioner submits that as per audited accounts of FY 2018-19, SLDC has incurred R&M expenses of Rs.0.08 Crore in FY 2018-19.

As per Regulation 22 (2) of BERC Tariff Regulations, 2007, SLDC has claimed the expenses as reflecting in audited accounts of FY 2018-19. The following Table shows the R&M expenses considered in Truing-up of FY 2018-19:

Table 2-2: Repairs and Maintenance expenses for FY 2018-19 (Rs. Crore)

Sl. No	Particulars	FY 2018-19	
		Approved in Tariff Order dated 07.03.2018	Claimed in Truing-up of FY 2018-19
1	R&M expenses as per audited accounts	0.46	0.08

The Hon'ble Commission is requested to approve R&M Expenses of Rs. 0.08 Crore in Truing-up of FY 2018-19.

2.2.3 Administration and General Expenses (A&G)

A&G Expenses mainly comprise expenses towards Conveyance and Traveling, Electricity & Power Charges, Miscellaneous Expenses, Telephone Expenses, Fees and Subscriptions, Legal Charges, and Printing and Stationery. As per audited accounts of FY 2018-19, SLDC has incurred A&G expenses of Rs.0.58 Crore in FY 2018-19.

As per Regulation 22 (2) of BERC Tariff Regulations, 2007, SLDC has claimed the expenses as reflecting in audited accounts of FY 2018-19. The following Table shows the A&G Expenses considered in Truing-up of FY 2018-19:

Table 2-3: Administration and General Expenses for FY 2018-19 (Rs. Crore)

Sl. No	Particulars	FY 2018-19	
		Approved in Tariff Order dated 07.03.2018	Claimed in Truing-up of FY 2018-19
1	A&G Expenses as per audited accounts	0.46	0.58

The Hon'ble Commission is requested to approve Administrative and General Expenses of Rs. 0.58 Crore in Truing-up of FY 2018-19.

The following table shows the total O&M expenses claimed by SLDC based on audited Accounts of FY 2018-19 as per Regulation 22 (2) of BERC Tariff Regulations, 2007:

Table 2-4: O&M Expenses for FY 2018-19 (Rs. Crore)

Sl. No	Particulars	FY 2018-19	
		Approved in Tariff Order dated 07.03.2018	Claimed in Truing-up of FY 2018-19
1	Employee expenses	3.23	4.06
2	Repairs and Maintenance Expenses	0.46	0.08
3	Administration and General Expenses	0.46	0.58



Sl. No	Particulars	FY 2018-19	
		Approved in Tariff Order dated 07.03.2018	Claimed in Truing-up of FY 2018-19
4	Total Operation and Maintenance Expenses	4.15	4.72

The Hon'ble Commission is requested to approve Operation and Maintenance Expenses of Rs. 4.72 Crore in Truing-up of FY 2018-19.

2.3 Interest on working capital

The Petitioner has arrived at the working capital requirement in accordance with norms specified for SLDC function in the BERC (Terms and conditions for determination of Tariff) Regulations, 2007, as shown in the Table below:

Table 2-5: Interest on Working Capital for FY 2018-19 (Rs. Crore)

Sl. No.	Particulars	FY 2018-19	
		Approved in Tariff Order dated 07.03.2018	Claimed in Truing-up of FY 2018-19
1	Receivables equivalent to two (2) month of SLDC charges	0.71	0.73
2	O&M Expenses of one month	0.35	0.39
3	Maintenance spares @ 1% of the historical cost escalated @ 6% per annum	-	-
	Total Working Capital	1.06	1.12
4	Interest on working Capital (%)	12.60%	12.20%
5	Interest on Working Capital to be claimed	0.13	0.14

The interest on working capital has been calculated on the basis of BERC (Terms and conditions for determination of Tariff) Regulations, 2007:

"Rate of interest on working capital will be computed at 350 basis point over and above the base rate. The interest on working capital shall be payable on normative basis notwithstanding that the transmission licensee may not have taken working capital loan from any outside agency or taken at different rates and amounts."



The SBI Base Rate as on 1st April 2018 is at 8.70% and therefore the rate of interest considered for computing Interest on Working Capital is 12.20% (i.e. 8.70% + 3.50%) for Truing-up of FY 2018-19.

The Hon'ble Commission is requested to approve Interest on Working Capital of Rs. 0.14 Crore in Truing-up of FY 2018-19.

2.4 Non-Tariff Income

The Petitioner submits that it has earned Non-Tariff Income through Rent recovery on its employee quarters, amounting to Rs. 0.002 crore.

The Hon'ble Commission is requested to approve Non-Tariff Income of Rs. 0.002 Crore in Truing-up of FY 2018-19.

2.5 Aggregate Revenue Requirement for FY 2018-19

The Petitioner submits the Aggregate Revenue Requirement for FY 2018-19 as summarised below:

Table 2-6: Aggregate Revenue Requirement (Rs. Crore)

Sl. No.	Particulars	FY 2018-19	
		Approved in Tariff Order dated 07.03.2018	Claimed in Truing-up of FY 2018-19
1	O&M cost	4.15	4.72
a	Employee cost	3.23	4.06
b	R&M expenses	0.46	0.08
c	A&G expenses	0.46	0.58
2	Interest on working capital	0.13	0.14
3	Less: Non-Tariff Income	-	0.002
4	Total ARR	4.28	4.86

The Petitioner requests the Hon'ble Commission to approve the ARR in the true-up for FY 2018-19 as Rs. 4.86 Crore.



2.6 Revenue Gap / (Surplus) for FY 2018-19

The Petitioner has computed the Revenue Gap/(Surplus) for FY 2018-19, based on the expenses detailed above and the Revenue earned from SLDC Charges, as summarised below:

Table 2-7: Revenue Gap/ (Surplus) for FY 2018-19 (Rs. Crore)

Sl. No.	Particulars	FY 2018-19	
		Approved in Tariff Order dated 07.03.2018	Claimed in Truing-up of FY 2018-19
1	Net Aggregate Revenue Requirement	4.28	4.86
2	Less: SLDC charges received	4.28	4.28
3	Revenue Gap / (Surplus) for the year (1-2)	-	0.58

Hence, the Hon'ble Commission is requested to approve the Revenue Gap of Rs. 0.58 Crore and allow SLDC to recover this deficit from the Distribution Licensees in FY 2020-21, in their power sharing ratio.



3 Annual Performance Review for 2019-20

3.1 Introduction

SLDC has filed the APR for FY 2019-20 based on the actual expenses and revenue for the first half of FY 2019-20 and estimated expenses and revenue for the second half of FY 2019-20. The APR is filled in accordance with relevant provisions of BERC (Multi Year Transmission Tariff and SLDC Charges) Regulations, 2018. Regulation 7 and Regulation 13 of BERC MYT Regulations, 2018 provides for APR of current year. The relevant extracts are as follows:

“7 Annual Review of Performance and True-up

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

13 True-Up and Annual Performance Review

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

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

Accordingly, SLDC has considered the values of actual expenditure according to the accounts for six months i.e. April, 2019 to September, 2019 and has projected the values of the next six months i.e. from October, 2019 to March 2020 for filing of APR Petition. A copy of trial balance for first half of FY 2019-20 is attached as **Annexure II**.

3.2 Capital Investment Plan

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



The Petitioner submits that due to the changing business environment and the Regulations governing the power market, the capital investment plan may need to be updated at various intervals in accordance with the policy initiatives/ directions of the Government and to align the growth path of the Company with the external business environment and internal factors affecting the business / operations of the Company.

3.2.1 SAMAST (Scheduling, Metering and Settlement of Transmission in Electricity)

The SAMAST project is being implemented to create a robust, scalable and transparent framework of scheduling, metering, accounting and settlement of energy transactions at intra-State as well as inter-State level, achieve operational excellence, and reduce the margin of errors while quantifying the scheduling, metering, accounting and settlement of energy transactions. There has been a change in the funding of SAMAST project from the last Petition dated November 28, 2018, as shown below:

Table 3-1: Cost break up Project SAMAST (Rs. Crore)

Sl. No.	Project Details	Cost Drivers	Estimated Cost
1	Appointment of agency for implementation of balance work of SAMAST in Bihar	Software and Hardware including Licensing	10.59
		Civil Work	
		AMC (for 5 years for Hardware & Software after post warranty period, i.e., 1 year for software and 3 years for hardware)	11.80
		Manpower cost for 5 years	
		Total	22.39

The project was awarded on June 6, 2019 and the work on the project has started. Previously, the project was supposed to be funded via PSDF grant and Internal Resource Funding (IRF). In the revised circumstances, the entire project is being funded by IRF. Due to change in funding, the payment terms of the project have changed as shown below:



Table 3-2: Payment terms of SAMAST (Rs. Crore)

Sl. No.	Source	FY 2019-20 (Project under Implementation)	FY 2020-21 (Projected)	FY 2021-22 (Projected)
1	IRF	3.2	7.39	1.48*

*Cost is for AMC of software for the first year

The Petitioner submits the projections of capital expenditure through Internal Resource funding, as shown in the Table below:

Table 3-3: Capital Expenditure through IRF (Rs. Crore)

Sl. No.	Parameter	Contract Amount of Project	FY 2019-20 (Project under Implementation)	FY 2020-21 (Projected)	FY 2021-22 (Projected)
1	Appointment of agency for implementation of balance work of SAMAST in Bihar (excluding 5 years AMC)	10.59	3.20	7.39	-

Table 3-4: Revenue Expenditure through IRF (Rs. Crore)

Sl. No.	Parameter	FY 2019-20 (Project under Implementation)	FY 2020-21 (Projected)	FY 2021-22 (Projected)
1	Software including Manpower cost (AMC)	-	-	1.48
2	Hardware including Manpower cost (AMC)	-	-	-

The Petitioner has projected the Capitalization of assets as shown below:

Table 3-5: Capitalization of Assets (Rs. Crore)

Sl. No.	Parameter	FY 2019-20 (Project under Implementation)	FY 2020-21 (Projected)	FY 2021-22 (Projected)
1	Software including Manpower cost (AMC)	-	10.59	-
2	Hardware including Manpower cost (AMC)	-	-	-



The Hon'ble Commission is requested to approve the Capital Expenditure schedule and capitalization, as proposed in the Tables above.

3.3 Operation and Maintenance (O&M) Expenses

As the strengthening of the SLDC is taking place, the number of employees has also been increased in SLDC, and the O&M cost for SLDC has increased commensurately. Therefore, for accurate projection, the Petitioner has mostly relied upon the True-Up for FY 2018-19 and actual six months data from April, 2019 to September, 2019.

3.3.1 Employee Expenses

The Employee Expenses primarily include costs towards salaries, dearness allowances, bonus, staff welfare and medical benefits, leave travel and earned leave encashment, and the terminal benefits in the form of pension, gratuity, etc.

Regulation 21.1 specifies that the employee cost shall be computed as per the approved norm escalated by Consumer Price Index (CPI) for immediately preceding three years, as follows:

"21.1 Employee Cost

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

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

Where:

EMP_n: Employee expense for the year n

EMP_b: Employee expense as per the norm

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

In accordance with the above Regulation, the Petitioner has considered the CPI indices up to March 2019 and taken average of preceding three years of escalation in CPI indices for consideration of escalation of base year employee expenses. The



following Table shows the escalation considered on base value for computation of employee expenses:

Table 3-6: CPI Inflation considered for FY 2019-20

Particulars	Actual				Estimate
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Annual Average CPI Index	265	276	284	300	
CPI Inflation		4.12%	3.08%	5.45%	4.22%

SLDC has hence, considered inflation rate of 4.22% on base value for computation of employee expenses for FY 2019-20. The actual employee expenses for FY 2018-19 are considered as base year employee expenses.

Table 3-7: Employee Expenses for FY 2019-20 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT order	Claimed in APR
1	Base year Employee expenses	3.49	4.06
2	Indexation %	4.28%	4.22%
3	Inflationary increase	0.15	0.17
4	Employee expenses	3.63	4.23

The Hon'ble Commission is requested to approve Employee Cost of Rs. 4.23 Crore in APR of FY 2019-20.

3.3.2 Repair and Maintenance (R&M) Expenses

From April 2019 to September 2019, there is no booking of R&M expenses in the accounts, however, booking in accounts will be done in next 6 months. Therefore, for FY 2019-20, same R&M expenses as approved in the Tariff Order dated February 15, 2019 has been considered.

As SLDC does not own any assets at present, the calculation of R&M expenses is done in line with the calculation of Employee Expenses. The inflationary index for the year is considered as 4.22% in line with the calculation shown in Table 3-6. The base year for the R&M expenses is considered as FY 2018-19.

Table 3-8: R&M Expenses for FY 2019-20 (Rs. Crore)

Sl.	Particulars	Approved in	Claimed in
-----	-------------	-------------	------------



No		MYT order	APR
1	Base year R&M Expenses	0.61	0.08
2	Indexation %	4.28%	4.22%
3	Inflationary increase	0.026	0.003
4	R&M Expenses	0.64	0.08

In this regard, the Petitioner submits that the overall projected R&M Expenses are yet to stabilize since many of the assets are currently under development phase. The Petitioner will therefore approach the Hon'ble Commission to consider the actual R&M expenses pursuant to completion of the projects/true-up Petitions based on audited accounts.

The Hon'ble Commission is requested to approve R&M expense of Rs. 0.08 Crore in APR of FY 2019-20.

3.3.3 Administrative and General Expenses (A&G)

A&G expenses mainly comprise costs towards insurance charges, security expenses, professional charges, conveyance and travelling allowances, holding charges and other debits.

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

"21.3 Administrative and General (A&G) Expense

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

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

Where:

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

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



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

As per the above Regulation, the calculation of WPI index is given below:

Table 3-9: WPI Inflation considered for FY 2019-20

Particulars	Actual				Estimate
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Annual Average WPI Index	110	112	115	120	
WPI Inflation		1.73%	2.92%	4.32%	2.99%

SLDC has hence, considered inflation rate of 2.99% on base norms for computation of A&G expenses for FY 2019-20. The A&G expenses of FY 2018-19 are considered as base year A&G expenses.

Table 3-10: A&G expenses for FY 2019-20 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT order	Claimed in APR
1	Base year A&G expenses	0.53	0.58
2	Indexation %	0.33%	2.99%
3	Inflationary increase	0.001	0.017
4	A&G Expenses	0.53	0.60

The Hon’ble Commission is requested to approve A&G Expenses of Rs. 0.60 Crore in APR of FY 2019-20.

3.3.4 Summary of Operation and Maintenance (O&M) Expenses

The summary of O&M expenses in the APR of FY 2019-20 are shown in the Table below:

Table 3-11: O&M Expenses for FY 2019-20 (Rs. Crore)

Sl. No	Particulars	Approved in MYT order	Claimed in APR
1	Employee Expenses	3.67	4.23
2	R&M Expenses	0.63	0.08
3	A&G Expenses	0.55	0.60



4	Total	4.85	4.91
---	-------	------	------

The Hon'ble Commission is requested to approve O&M Expenses of Rs. 4.91 Crore in APR of FY 2019-20.

3.4 Return on Equity

As capitalization is not considered in FY 2019-20 and all capitalization is scheduled in FY 2020-21, Return on Equity is considered as zero.

3.5 Non-Tariff Income

The Petitioner submits that it has earned Non-Tariff Income of Rs. 0.001 Crore till September 31, 2019 through Rent recovery from its residential quarters and library fine. SLDC has estimated the Non-Tariff Income to be Rs. 0.002 Crore at the end of March 31, 2020.

The Hon'ble Commission is requested to approve Non-Tariff Income of Rs. 0.002 Crore in APR of FY 2019-20.

3.6 Interest on Working Capital

The Petitioner has arrived at the working capital requirement in accordance with Regulation 26 of BERC MYT Regulation, 2018, as follows:

"26 Interest on working Capital

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

- (i) Receivables equivalent to two (2) month of transmission charges calculated on target availability level.*
- (ii) O&M Expenses of one (01) month.*
- (iii) Maintenance spares @ 15% of O&M expenses for one month...*

Transmission System Users.

b) Interest on working capital shall be on normative basis and rate of interest shall be equal to the State Bank one-year Marginal Cost of Funds-based Lending Rate



('MCLR') as of the date on which petition for determination of tariff is filed plus 150 basis points. The rate of interest for the purpose of Truing-up shall be the weighted average MCLR of the concern Financial Year plus 150 basis points..."

In the BERC Tariff Order Dated February 15, 2019, the Hon'ble Commission while calculating IoWC for FY 2019-20 has considered the components of working capital requirement as i) O&M expenses (1 month), ii) Maintenance spares @40% of 1 month R&M expenses, iii) Receivables - 2 months. In accordance with the above provisions and method adopted by the Hon'ble Commission, SLDC has computed the interest on working capital for FY 2019-20. Regulation 26 (b) specifies that the rate of interest shall be equal to State Bank of India (SBI) one-year MCLR as of the date on which Tariff Petition is filed plus 150 basis points.

SLDC has hence, considered MCLR rate of 8.00% for one-year tenure revised with effect from 10th November 2019 as available on its website (<https://www.sbi.co.in/portal/web/interest-rates/mclr>) and accordingly added 150 basis points as provided in the Regulation. SLDC has therefore, considered interest rate of 9.50% (8.00%+1.50%) for computation of interest on working capital for the FY 2019-20, as shown in the Table below:

Table 3-12: Interest on Working Capital for FY 2019-20 (Rs. Crore)

Sl. No.	Particulars	FY 2019-20	
		Approved in MYT order	Claimed in APR
1	Receivables equivalent to two (2) months	0.80	0.84
2	O&M Expenses of one month	0.40	0.41
3	Maintenance spares @40% of 1 month R&M expenses	0.02	0.003
4	Total Working Capital	1.22	1.25
5	Rate of Interest on Working Capital (%)	10.50%	9.50%
6	Interest on Working Capital	0.12	0.12

The Hon'ble Commission is requested to approve Interest on Working Capital of Rs. 0.12 Crore in APR of FY 2019-20.

3.7 Aggregate Revenue Requirement (ARR) for FY 2019-20

The Petitioner submits the ARR for FY 2019-20 as summarised below:

Table 3-13: ARR for FY 2019-20 (Rs. Crore)

Sl. No.	Particulars	FY 2019-20	
		Approved in MYT Order	Claimed in APR
1	O&M cost	4.85	4.91
a	Employee cost	3.63	4.23
b	R&M expenses	0.64	0.08
c	A&G expenses	0.53	0.60
2	Interest on Working Capital	0.12	0.12
3	Less: Non-Tariff Income	0.11	0.002
4	Total ARR	4.81	5.03

The Petitioner requests the Hon'ble Commission to approve the ARR in the APR for FY 2019-20 as Rs. 5.03 Crore.

3.8 Revenue Gap / (Surplus) for FY 2019-20

The Petitioner has considered the components of ARR as discussed in this Chapter and has adjusted the Revenue approved by the Commission in previous Tariff Order for FY 2019-20, to arrive at the Revenue Gap/(Surplus) for FY 2019-20. Further, the Petitioner has adjusted the Revenue Surplus of FY 2017-18 against the approved and revised ARR of FY 2019-20, as done by the Hon'ble Commission in the Tariff Order for FY 2019-20, as shown in the following Table:

Table 3-14: Revenue Gap/(Surplus) for FY 2019-20 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT Order	Claimed in APR
1	Net Aggregate Revenue Requirement	4.81	5.03
2	Less: Trued-up Revenue Gap/(Surplus) of FY 2017-18 with carrying cost	0.98	0.98
3	Annual SLDC charges Approved by Commission for FY 2019-20 in Tariff Order dated 15th Feb 2019	3.83	3.83
4	Revenue Gap /(Surplus) for the year (1-2)	-	0.22



The Petitioner requests the Hon'ble Commission to approve the Revenue Gap of Rs. 0.22 crore in the APR for FY 2019-20.



4 Annual Revenue Requirement for 2020-21

4.1 Introduction

SLDC has filed the ARR for FY 2020-21 in accordance with relevant provisions of BERC MYT Regulations, 2018. The Hon'ble Commission has already approved the ARR for FY 2020-21 in the Tariff Order dated 15th February 2019. However, SLDC has filed for approval of revised ARR and accordingly Tariff for FY 2020-21 based on actuals of FY 2018-19 and revised estimates of FY 2019-20.

Regulation 11.3 of BERC MYT Regulations, 2018 provides requires the Transmission Licensee or SLDC to file for revised ARR for each year of the Control Period. The relevant extracts are as follows:

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

“13 True-Up and Annual Performance Review

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

(f) Notwithstanding anything contained in regulation 4 of these Regulations, the Revenue gap/surplus arising out of Truing up shall be considered by the Commission while determining the ARR of ensuing year(s). While approving adjustments towards revenue/expenses in future years, arising out of Truing up exercises, the Commission



may allow the carrying costs as determined by the Commission of such expenses /revenues. However the revised estimated gap/surplus as a result of APR may or may not be passed in the ARR of ensuing year ...”

Regulation 4 of the BERC MYT Regulations, 2018 also provides for the Hon’ble Commission to determine tariff for the Transmission Charges in each year of the Control Period. The relevant extracts are as follows:

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

Accordingly, BSPTCL has proposed for re-determination of Aggregate Revenue Requirement (ARR) for FY 2020-21, as discussed in the following paragraphs.

4.2 Capital Investment Plan

The detailed Capital Investment Plan has been covered in Chapter 3, which covers the Capital Expenditure and Capitalisation for FY 2020-21 also.

4.3 Operation and Maintenance (O&M) Expenses

4.3.1 Employee Expenses

The Employee Expenses primarily include costs towards salaries, dearness allowances, bonus, staff welfare and medical benefits, leave travel and earned leave encashment, and the terminal benefits in the form of pension, gratuity, etc.

Regulation 21.1 specifies that the employee cost shall be computed as per the approved norm escalated by Consumer Price Index (CPI) for immediately preceding three years, as follows:

“21.1 Employee Cost

Employee cost shall be computed as per the approved norm escalated by consumer price index (CPI), adjusted by provisions for expenses beyond the control of the Transmission Licensee and one-time expected expenses, such as recovery/adjustment



of terminal benefits, implications of pay Commission, arrears and Interim Relief, governed by the following formula:

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

Where:

EMP_n: Employee expense for the year *n*

EMP_b: Employee expense as per the norm

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

In accordance with the above Regulation, the Petitioner has considered the CPI indices up to March 2019 and taken average of preceding three years of escalation in CPI indices for escalation of base year employee expenses. The following Table shows the escalation considered on base value for computation of employee expenses:

Table 4-1: CPI Inflation

Particulars	Actual				Estimate
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Annual Average CPI Index	265	276	284	300	
CPI Inflation		4.12%	3.08%	5.45%	4.22%

SLDC has hence, considered inflation rate of 4.22% on base value for computation of employee expenses for FY 2020-21. The employee expenses projected in the APR for FY 2019-20 are considered as base year employee expenses for projecting employee expenses for FY 2020-21, as shown in the Table below:

Table 4-2: Employee Expenses for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT Order	Claimed in ARR
1	Base year Employee expenses	3.63	4.23
2	Indexation %	4.28%	4.22%
3	Inflationary increase	0.16	0.18
4	Employee expenses	3.79	4.41

The Hon'ble Commission is requested to approve Employee expenses of Rs. 4.41 Crore in ARR of FY 2020-21.



4.3.2 Repair and Maintenance (R&M) Expenses

As SLDC does not own any assets at present, the calculation of R&M expenses is done in line with the calculation of Employee Expenses. The inflationary index for the year is considered as 4.22% in line with the calculation shown in Table 4-1. The R&M expenses projected in the APR for FY 2019-20 are considered as base year R&M expenses for projecting R&M expenses for FY 2020-21, as shown in the Table below:

Table 4-3: R&M Expenses for FY 2020-21 (Rs. Crore)

Sl. No	Particulars	Approved in MYT Order	Claimed in ARR
1	Base year R&M Expenses	0.64	0.08
2	Indexation %	4.28%	4.22%
3	Inflationary increase	0.03	0.003
4	R&M Expenses	0.67	0.08

In this regard, the Petitioner submits that the overall projected R&M Expenses are yet to stabilize since many of the assets are currently under development phase. The Petitioner will therefore approach the Hon'ble Commission to consider the actual R&M expenses pursuant to completion of the projects/true-up Petitions based on audited accounts.

The Hon'ble Commission is requested to approve R&M expense of Rs. 0.08 Crore in ARR of FY 2020-21.

4.3.3 Administrative and General Expenses (A&G)

A&G expenses mainly comprise costs towards insurance charges, security expenses, professional charges, conveyance and travelling allowances, holding charges and other debits.

Regulation 21.3 of BERC MYT Regulations, 2018 provides for escalation of base value norms for consideration of A&G expenses. The relevant extracts are as follows:

"21.3 Administrative and General (A&G) Expense

A&G expense shall be computed as per the norm escalated by wholesale price index (WPI) and Consumer Price Index (CPI) in the ratio 60:40 and adjusted by provisions



for confirmed initiatives (IT etc. initiatives as proposed by the Transmission Licensee and validated by the Commission) or other expected one-time expenses, and shall be governed by following formula:

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

Where:

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

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

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

As per the above Regulation, the calculation of WPI index is given below:

Table 4-4: WPI Inflation

Particulars	Actual				Estimate
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Annual Average WPI Index	110	112	115	120	
WPI Inflation		1.73%	2.92%	4.32%	2.99%

SLDC has hence, considered inflation rate of 2.99% on base norms for computation of A&G expenses for FY 2020-21. The A&G expenses projected in the APR for FY 2019-20 are considered as base year A&G expenses for projecting A&G expenses for FY 2020-21, as shown in the Table below:

Table 4-5: A&G expenses for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT Order	Claimed in ARR
1	Base year A&G expenses	0.53	0.60
2	Indexation %	0.33%	2.99%
3	Inflationary increase	0.002	0.017
4	A&G Expenses	0.53	0.62

The Hon’ble Commission is requested to approve A&G Expenses of Rs. 0.62 Crore in ARR of FY 2020-21.

4.3.4 Summary of Operation and Maintenance (O&M) Expenses

The summary of O&M expenses for FY 2020-21 are shown in the Table below:

Table 4-6: O&M Expenses for FY 2020-21 (Rs. Crore)

Sl. No	Particulars	Approved in MYT Order	Claimed in ARR
1	Employee Expenses	3.79	4.41
2	R&M Expenses	0.67	0.08
3	A&G Expenses	0.53	0.62
4	Total	4.99	5.11

The Hon'ble Commission is requested to approve O&M Expenses of Rs. 5.11Crore in ARR of FY 2020-21.

4.4 Depreciation

The Petitioner submits that it has calculated Depreciation in accordance with Regulation 23 of BERC MYT Regulations, 2018, as reproduced below:

"23. Depreciation

- (i) *Depreciation shall be calculated for each year of the control period on the original cost of the fixed assets of the corresponding year...*
- (iii) *Depreciation shall be calculated annually on the basis of assets capitalised and put to use based on the straight line method over the useful life of the asset and at the rate not exceeding the rate specified by the Central Electricity Regulatory Commission from time to time as provided in Appendix-III of these Regulations."*

ProjectSAMAST comprises of Software Licensing and Hardware (I.T) installation. Accordingly, the depreciation has been calculated and the weighted average rate of depreciation is considered as 28% as per Appendix-III of BERC MYT Regulation, 2018. The calculation of depreciation is shown below:

Table 4-7: Depreciation for FY 2020-21 (Rs. Crore)

Sl. No	Particulars	Approved in MYT Order	Claimed in ARR
1	Opening depreciable GFA	-	-
2	Addition during the year	-	10.59
3	Closing GFA	-	10.59



4	Rate of Depreciation	-	28%
5	Depreciation	0.01	2.97

The Hon'ble Commission is requested to approve Depreciation of Rs. 2.97 Crore in ARR of FY 2020-21.

4.5 Return on Equity

The Petitioner submits that it has calculated RoEin accordance with Regulation 22 of BERC MYT Regulations, 2018, as reproduced below:

"22. Return on Equity

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

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

The capitalization of project SAMAST is being executed via Internal Resource Funding. Amount of Rs. 10.59 Crore will be capitalized in FY 2020-21. For calculation of RoE, equity has been considered as Rs. 3.18 crore, i.e., 30% of the Project Cost. The balance amount has been considered as Normative Loan, i.e., Rs. 7.42 crore. The calculation of RoE is summarised in the table below:

Table 4-8: Return on Equity for FY 2020-21 (Rs. Crore)

Sl. No	Particulars	Approved in MYT Order	Claimed in ARR
1	Equity	0.09	3.18
2	Rate of Return on Equity	15.50%	15.50%
3	Return on Equity	0.01	0.49

The Hon'ble Commission is requested to approve RoE of Rs. 0.49 Crore in ARR of FY 2020-21.



4.6 Interest and Finance charges on loan capital

The Petitioner submits that as the SAMAST project is being funded by Internal Resource Funding, there is no actual loan.

Regulation 24 (b) specifies that

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

Hence, for the purpose of tariff calculations the normative Debt:Equity ratio of 70:30 has been considered, and equity has been considered as Rs. 3.18 Crore, with the balance amount Rs. 7.42 Crore being considered as Normative Loan.

SLDC submits that there is no opening balance of Normative Loan to be considered as there is no closing balance of Normative Loan for the previous year FY 2019-20. The interest and finance charges have been calculated in accordance with Regulation 24 of BERG MYT Regulations, 2018 as shown below:

*“24.(g) The rate of interest shall be the weighted average rate of interest...
Provided further that if no actual loan is outstanding but normative loan is still outstanding and the last available weighted average rate of interest is also not available, rate of interest equal to the State Bank one-year Marginal Cost of Funds-based Lending Rate (‘MCLR’) shall be applicable.”*

The rate of interest has been considered as per the above Regulation, as the one-year MCLR rate of 8.50% as on April 2019. The calculation of interest on normative loan is summarised below:

Table 4-9: Interest and Finance Charges for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	Approved in MYT Order	Claimed in ARR
1	Opening Loan	-	-
2	Addition during the year	0.21	7.42



3	Normative Repayment (Equal to Depreciation)	-	2.97
4	Closing Loan	-	4.45
5	Average Loan	-	2.22
6	Interest Rate (%)	8.50%	8.50%
7	Interest on Loan	-	0.19
8	Other Finance Charges	-	-
9	Interest and Finance Charges	0.02	0.19

The Hon'ble Commission is requested to approve Interest on normative loan of Rs. 0.19 Crore in ARR of FY 2020-21.

4.7 Non-Tariff Income

The Petitioner has estimated the Non-Tariff Income at the same level as that estimated for FY 2019-20, i.e., Rs. 0.002 Crore.

The Hon'ble Commission is requested to approve Non-Tariff Income of Rs. 0.002 Crore in ARR of FY 2020-21.

4.8 Interest on Working Capital

In the Tariff Order Dated February 15, 2019, the Hon'ble Commission while calculating IoWC for FY 2020-21 has considered the components of working capital requirement as i) O&M expenses (1 month), ii) Maintenance spares @40% of 1 month R&M expenses, iii) Receivables - 2 months. In accordance with the above provisions and method of Hon'ble Commission, SLDC has computed the interest on working capital for FY 2020-21. Regulation 26 (b) specifies that the rate of interest shall be equal to State Bank of India (SBI) one-year MCLR as of the date on which Tariff Petition is filed plus 150 basis points.

SLDC has hence, considered MCLR rate of 8.00% for one-year tenure revised with effect from 10th November 2019 as available on its website (<https://www.sbi.co.in/portal/web/interest-rates/mclr>) and accordingly added 150 basis points as provided in the Regulation. SLDC has therefore, considered



interest rate of 9.50% (8.00%+1.50%) for computation of interest on working capital for FY 2020-21, as shown in the Table below:

Table 4-10: Interest on Working Capital for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in MYT Order	Claimed in APR
1	Receivables equivalent to two (2) months	0.84	1.46
2	O&M Expenses of one month	0.42	0.41
3	Maintenance spares @40% of 1 month R&M expenses	0.02	0.003
4	Total Working Capital	1.28	1.870
5	Rate of Interest on Working Capital (%)	10.50%	9.50%
6	Interest on Working Capital	0.13	0.18

The Hon'ble Commission is requested to approve Interest on Working Capital of Rs. 0.18 Crore in ARR of FY 2020-21.

4.9 Aggregate Revenue Requirement (ARR) for FY 2020-21

The Petitioner submits the ARR for FY 2020-21 as summarised below:

Table 4-11: ARR for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21	
		Approved in MYT Order	Claimed in ARR
1	O&M cost	4.99	4.92
a	Employee cost	3.79	4.24
b	R&M expenses	0.67	0.08
c	A&G expenses	0.53	0.60
2	Depreciation	0.01	2.97
3	Interest on Loan Capital	0.02	0.19
4	Interest on Working Capital	0.13	0.18
5	Return on Equity	0.01	0.49
6	Less: Non-Tariff Income	0.13	0.002
7	Total ARR	5.03	8.75



The Petitioner requests the Hon'ble Commission to approve the ARR for FY 2020-21 as Rs. 8.75 Crore.

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

The Petitioner has considered the components of ARR as discussed in this Chapter and has adjusted the Revenue approved by the Commission in previous Tariff Order for FY 2019-20, i.e., existing SLDC Charges, to arrive at the Revenue Gap/(Surplus) for FY 2020-21, as shown in the following Table:

Table 4-12: Revenue Gap/(Surplus) for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	Claimed in ARR
1	Net Aggregate Revenue Requirement	8.75
2	Annual SLDC Charges approved by Commission for FY 2019-20 in Tariff Order dated 15 th February 2019	3.83
3	Revenue Gap / (Surplus) for the year (1-2)	4.92

The Petitioner requests the Hon'ble Commission to approve the Revenue Gap of Rs. 4.92 crore for FY 2020-21. Further, the Petitioner requests the Hon'ble Commission to allow recovery of the projected ARR along with the Revenue Gap of FY 2018-19 through revised SLDC Charges for FY 2020-21, as proposed in the next Chapter.

5 SLDC Operating Charges

5.1 Trued up Revenue Gap of FY 2018-19

The Petitioner has arrived at net Revenue Gap of Rs.0.58 crore in the truing up for FY 2018-19. The Petitioner, in terms of Regulation 22 of the BERC Tariff Regulations, 2007 has carried forward the trued up Revenue Gap of FY 2018-19 along with carrying cost to the ARR of FY 2020-21.

The Petitioner has considered the carrying cost of 12.20% (SBI Base Rate 8.70%+3.50%) as on April 1, 2018 for half year of FY 2018-19 (as per BERC Tariff Regulations, 2007), 9.50% (SBI MCLR+1.50%) as on November 10, 2019 for one year of FY 2019-20 and half year of FY 2020-21 as per the methodology adopted by APTEL in the Judgment dated 08.04.2015 in Appeal No.160 of 2012 (Reliance Infrastructure Ltd. Vs MERC & others), and adopted by the Hon'ble Commission in the MYT Order, as detailed in the below Table:

Table 5-1: Trued up Revenue Gap of FY 2018-19 with carrying cost (Rs. Crore)

Sl. No.	Particulars	FY 2020-21
1	Revenue Gap in True Up of 2018-19	0.58
2	Interest for FY 2018-19 [(SBI Base Rate 8.70%+3.50%) @12.20%] for 6 months	0.03
3	Interest for FY 2019-20 [(SBI MCLR 8.00%+1.5%) @9.50%]] for 1 year	0.05
4	Interest for FY 2020-21 [(SBI MCLR 8.00%+1.5%) @9.50%] for 6 months	0.03
5	Total Revenue Gap with carrying cost	0.69

5.2 Annual SLDC Operating Charges for FY 2020-21

The Petitioner has projected the ARR for FY 2020-21 as Rs. 8.75 Crore. The Revenue Gap of FY 2018-19 with Carrying cost works out to Rs. 0.69 Crore and hence, the Annual SLDC Operating charges for FY 2020-21 has been computed as shown in the Table below:



Table 5-2: Annual SLDC Operating Charges for FY 2020-21 (Rs. Crore)

Sl. No.	Particulars	FY 2020-21
1	Aggregate Revenue Requirement for FY 2020-21	8.75
2	Trued up Revenue Gap with carrying cost for FY 2018-19	0.69
3	Annual SLDC Charges for FY 2020-21	9.44

The Petitioner requests the Hon'ble Commission to approve the Annual SLDC Operating Charges for FY 2020-21 as Rs. 9.44 Crore.

5.3 Methodology for recovery of ARR

The Petitioner proposes to recover the SLDC Operating Charges as per Regulation 35 of BERC MYT Regulations, 2018, as reproduced below:

"35. Sharing of SLDC Charges

35.1 The SLDC Charges payable by the Transmission System Users shall be computed in accordance with the following formula:-

*SLDC Charges payable for a month $SC_n = (SC/12) * (AC_n/SAC)$*

Where, SC_n = SLDC charge payable by Transmission System user

SC = Approved SLDC Aggregate Revenue Requirement for the year

AC_n = Actual installed capacity of nth Transmission System user in case of generating stations/long term and medium term contracted capacities in case of sellers/aggregated allocated capacity and contracted capacity in case of distribution licensee/long term contracted capacity in case of buyer. SAC = Sum of actual installed capacity of Transmission System users in case of generating stations (within Bihar), long term and medium term contracted capacities in case of sellers, aggregated allocated capacity and contracted capacity in case of distribution licensee and long term contracted capacity in case of buyer.

35.2 The SLDC Charges approved for the Year shall be equally spread over the 12 months of the Year and SLDC Charges per MW per month shall be computed by SLDC accordingly."

Accordingly, the Petitioner proposes to recover the SLDC charges on monthly basis from the DISCOMs in their power sharing ratio and also from the transmission system users in ratio of their contracted capacity.



6 Prayers

The petitioner respectfully requests the Hon'ble Commission to:

- I. Admit this Petition;
- II. Examine the proposal submitted by the Petitioner in the enclosed Petition for a favourable dispensation;
- III. Pass suitable Orders with respect to the Trued-up ARR for FY 2018-19 of Rs. 4.86 Crore, APR for FY 2019-20 for Rs. 5.03 Crore, and ARR for FY 2020-21 for Rs. 8.75 Crore.
- IV. Approve the SLDC charges as per the proposal and allow relaxation in tariff norms wherever sought for;
- V. Pass separate Order for the Petitioner against the present Petition;
- VI. Permit to propose suitable changes to the respective True-up/APR/ARRs, prior to the final approval by the Hon'ble Commission;
- VII. Permit to revise any inadvertent omissions/errors/shortcomings, etc., and accordingly add/change/modify/alter this filing and make further submissions as may be required at a future date;
- VIII. Pass such Order as the Hon'ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case.

Place: Patna

A. K. Chaudhary

Dated: 15 November 2019

Chief Engineer (System Operations)



7 Compliance to Directives

The Hon'ble Commission in Tariff Order dated 15 February, 2019, had issued certain directives to State Load Dispatch Centre (SLDC). This chapter deals with the compliance status of directives for compliance and implementation by the petitioner.

7.1 Directive 1: Autonomy of SLDC

a) Original Directive issued by the Hon'ble Commission

The direction issued by the Hon'ble Commission in this regard is as follows:

"The Petitioner is directed to take necessary steps to strengthen the SLDC and also to make it a separate entity. The status report shall be furnished by 30.09.2019."

b) Commission's Observation and Direction in Order dated 15 February, 2019

The Petitioner has not initiated any action on the subject matter even after a lapse of one year. The Petitioner is again directed to take necessary steps to strengthen the SLDC and also to make it a separate entity. The status report shall be furnished by 30.09.2019.

c) Commission's directive as per letter dated October 10, 2019:

BSPTCL shall furnish the status of resolution of the board meeting of Power Holding Company in which agenda of making SLDC a separate entity has been taken up to place the matter before Govt. of Bihar as submitted by SLDC.

d) Compliance Status and Action to be taken by SLDC

BSPTCL has taken the following steps to strengthen the SLDC:

1. Separate ARR Petition is being filed by SLDC
2. Various new employees have been deputed separately (ESE-1 no., EEE-1 no. & AEE-09 nos.), in addition to the existing employees to strengthen SLDC.
3. 13 Nos. additional AExE have been certified in System Operation in April, 2019.
4. Prepared the DSM account and Reactive account for Railway (Long Term Open Access of 50 MW) and weekly DSM bills are being generated through EASS Software of SAMAST.
5. Web-based Scheduling and Accounting of Thermal power plant (MTPS stage-I & BTPS) have been started since October, 2019 and are being done on regular basis.
6. Processing of STOA application through software is under progress.



7. SLDC, BSPTCL and PMC wing of BSPHCL are looking after the balance work of market operation. In this regard, PMC wing is looking after Power Procurement/Arrangement, etc., on behalf of SLDC.

As per previous directions, SLDC has studied the CABIL report and had conducted a workshop on April 23, 2019. Compliance of CABIL Report for different milestones of roadmap has been submitted to the Hon'ble BEREC vide letter no. 72 dated February 07, 2019.

The strengthening of SLDC in all matters is going on which will certainly facilitate autonomy for SLDC.

7.2 Directive 2: Users of SLDC

a) Original Directive issued by the Hon'ble Commission

The direction issued by the Commission in this regard is as follows:

"The Commission directs the petitioner to register all users of SLDC and furnish the status report by 30.09.2019."

b) Commission's Observation and Direction in Order dated 15 February, 2019

The Commission directs the Petitioner to register all users of SLDC and furnish the status report by 30.09.2019.

c) Commission's directive as per letter dated October 10, 2019:

Previously, SLDC furnished details of 09 Nos. of its users and linked this activity to SAMAST, which is not rational. SLDC shall furnish the details of registration of its users with ensuing year's Tariff Petition.

d) Compliance Status and Action to be taken by SLDC

1. SLDC has furnished the list of connected users in the MYT Petition for Control Period from FY 2019-20 to FY 2021-22 as below :-

Sl. No.	Users	Type of User	Connected load / Contract demand	Remarks
1	NBPDCL	DISCOM	8130 MW	As per tariff petition submitted
2	SBPDCL	DISCOM	9685 MW	



Sl. No.	Users	Type of User	Connected load / Contract demand	Remarks
				by both DISCOMs
3	Bihar Cement Plant (Unit of Shree Cement)	STOA	10 MW*	For 06 Hrs (10.00 to 16.00 Hrs)*
4	New Bihar Cement Plant (Unit of Shree Cement)	STOA	5 MW*	
5	Railway	LTOA	50 MW	Round the Clock
6	ITC, Manager	STOA	1 MW	Round the Clock
7	KBUNL Stage-1 (2 x 110 MW)	Generator	220 MW	Running
8	BTPS Stage-1 (2 x 110 MW)	Generator	220 MW	
9	BTPS Stage-II (2 x 250 MW)	Generator	500 MW	
		Tota	18821	

*Presently contracted demand and duration have been changed for S.No.3&4 as follows

Sl. No.	Users	Type of User	Connected load / Contract demand	Remarks
3	Bihar Cement Plant (Unit of Shree Cement)	STOA	20 MW	For 18 Hrs (00.00 to 18.00 Hrs)*
4	New Bihar Cement Plant (Unit of Shree Cement)	STOA	14.5 MW	

- Presently Open Access module has been developed under SAMAST and all 4 open access consumers have been registered in the system.
- Existing DISCOMs (NBPDC and SBPDCL) and Generators are previous users, i.e., erstwhile BSEB users before formation of Company and for their registration, the Hon'ble Commission is requested to allow collection of registration fee from these users.

7.3 Directive 3: Implementation of Scheduling, Accounting, Metering and Settlement of Transactions in Electricity (SAMAST)

a) Original Directive issued by the Hon'ble Commission



“SLDC is directed to adhere to the road map for SAMAST and submit an updated status report on the implementation of SAMAST by August, 2018.”

b) Commission’s Observation and Direction in Order dated 15 February, 2019

The Commission has noted the reply of SLDC. SLDC is directed to adhere to the road map for SAMAST and submit an updated status report on the implementation of SAMAST by 30th September, 2019 to the Commission.

c) Commission’s directive as per letter dated October 10, 2019

SLDC should shrink the duration of activities to adhere to timeline committed and shall furnish the updated report with ensuing year tariff petition.

d) Compliance Status and Action to be taken by SLDC

Work order for Balance Work of SAMAST was awarded on 06.06.2019 and completion period of this work is 01 year, i.e., 05.06.2020. SLDC is monitoring all the activities for implementation of SAMAST work being done by M/s PwC in JV with M/s Infotek Services. The target completion date is June 2020.

7.4 Directive 4: Asset Register

a) Original Directive issued by the Hon’ble Commission

“SLDC is directed to develop its own assets in future and to delink from PGCIL and submit its plan/proposal; if any in this regard. SLDC is further directed to maintain asset / property register, owned by SLDC and PGCIL separately showing the details of nature of equipment, value of equipment, buildings and other civil works etc., copy of the asset register to be submitted along with tariff petition to be filed for FY 2019-20.”

b) Commission’s Observation and Direction in Order dated 15 February, 2019

The Commission has noted the reply of SLDC. SLDC is again directed to maintain the asset register and submit copy of the same to the Commission on implementation of SAMAST.

c) Commission’s directive as per letter dated October 10, 2019

SLDC should furnish the correspondence before filing ensuing year’s Tariff Petition.



d) Compliance Status and Action to be taken by SLDC

In compliance, SLDC assures that it will maintain the Asset Register after successful implementation of SAMAST project.

7.5 Directive 5: Ring Fencing of SLDC

a) New Directive issued by the Hon'ble Commission

BSPTCL is directed to strengthen the SLDC function and to ring fence it sufficiently.

As a first step, BSPTCL is directed to host separately a website for SLDC. The SLDC will provided details and data pertaining to SLDC functions as stipulated under Sec 32 of the Electricity Act 2003. The website will provide information on the following but not limited to below:

- i. Real-time data of power supply and demand for Bihar,
- ii. Operations data covering daily & monthly reports, day ahead demand, shutdown planning, line outages, TTC/ATC for the state, load flow studies
- iii. Scheduling data covering entitlements from power stations, drawl schedule, generator schedule, declared capacity, surplus power, bilateral schedule, estimated loss and State Energy Account.
- iv. Open Access information covering procedure for STOA, status report on STOA applications
- v. Energy accounting within the state

b) Commission's directive as per letter dated October 10, 2019

SLDC shall furnish the compliance before filing ensuring year's Tariff Petition.

c) Compliance Status and Action to be taken by SLDC

In compliance, SLDC submits that it will implement the website by March 2020 and maintain all the data thereof.