PETITION FOR TRUE UP FOR FY 2018-19, REVIEW OF FY 2019-20 AND MULTI YEAR TARIFF FOR CONTROL PERIOD FROM FY 2020-21 TO FY 2022-23

Submitted by

pstcl

PUNJAB STATE TRANSMISSION CORPORATION LIMITED

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List of Abbreviations

AAD	Advance Against Depreciation
A&G	Administrative and General
AFC	Annual Fixed Cost
APTEL	Appellate Tribunal for Electricity
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
BBMB	Bhakra Beas Management Board
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CPI	Consumer Price Index
CWIP	Capital Work in Progress
DPR	Detailed Project Report
GFA	Gross Fixed Assets
LTOA	Long Term Open Access
MAT	Minimum Alternate Tax
O&M	Operations and Maintenance
OA	Open Access
PLR	Prime Lending Rate
PSEB	Punjab State Electricity Board
PSERC	Punjab State Electricity Regulatory Commission
PSPCL	Punjab State Power Corporation Limited
PSTCL	Punjab State Transmission Corporation Limited
RfP	Request for Proposal
R&M	Repairs and Maintenance
RoE	Return on Equity
SBAR	State Bank of India Advance Rate
SBI	State Bank of India
SLDC	State Loan Despatch Centre
STOA	Short term Open Access
STU	State Transmission Utility
ULDC	Unified Load Dispatch & Communication
WPI	Wholesale Price Index

BEFORE THE PUNJAB STATE ELECTRICITY REGULATORY COMMISSION, CHANDIGARH

Case No. __ of 2019

IN THE MATTER OF:	Filing of the Petition for the approval of True-up of ARR for FY 2018-19, Annual Performance Review for FY 2019-20 for Transmission Business and SLDC, under Section 62, 64 and 86 of the Electricity Act, 2003 read with the Regulation 12 and 13 of PSERC (Terms and Conditions of Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2014 as amended from time to time and; approval of forecast of ARR for Transmission Business and SLDC for the Control Period from FY 2020-21 to FY 2022-23 and determination of Tariff for Transmission Business and SLDC for FY 2020-21 under Section 62, 64 and 86 of the Electricity Act, 2003 read with Regulation 10 of PSERC (Terms and Conditions of Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2019.

AND

IN THE MATTER OF	Punjab State Transmission Corporation Limited (hereinafter referred as "PSTCL" or "the Petitioner")

The Petitioner respectfully submits as under: -

1 Introduction

1.1 Background

The Punjab State Transmission Corporation Limited (hereinafter referred to as PSTCL or the Petitioner) is a transmission licensee for transmission of electricity in the areas as notified by the Government of Punjab vide Notification No. 1/9/08-EB(PR) 196 dated April 16, 2010. PSTCL is vested with the function of intra-State transmission of electricity in the State of Punjab and the operation of State Load Despatch Centre (SLDC). Further, in terms of Section 39 of the Act, the Government of Punjab notified PSTCL as the State Transmission Utility (STU).

1.2 Submission of True-up and Annual Performance Review Petition

The Hon'ble Punjab State Electricity Regulatory Commission ("the Commission" or "PSERC") has notified the PSERC (Terms and Conditions of Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2014 (hereinafter referred to as "PSERC MYT Regulations, 2014") in exercise of powers conferred on it by Section 61 read with Section 181(2) of the Electricity Act, 2003 (No. 36 of 2003) (herein after referred as "the Act"). Hon'ble Commission also notified two (2) amendments in PSERC MYT Regulations, 2014 on February 3, 2016 and on August 8, 2018. As per Hon'ble Commission's notification dated May 28, 2015, the effective date of enforcement of these Regulations was April 1, 2017 and three-year Multi Year Tariff ("MYT") Control Period is from FY 2017-18 to FY 2019-20.

The Hon'ble Commission vide its Order dated October 23, 2017 had approved Aggregate Revenue Requirement (ARR) for MYT Control period FY 2017-18 to FY 2019-20 and Tariff for FY 2017-18 for PSTCL; including Transmission Business and SLDC.

Further, PSTCL had filed Petition (Petition No. 65 of 2017) for revised estimates of ARR and Tariff for FY 2018-19 on November 30, 2017. The Hon'ble Commission, vide its Order dated April 19, 2018, approved revised ARR and Tariff for FY 2018-19.

PSTCL had filed a Petition for Annual Performance Review for FY 2018-19 and revised estimates of ARR and Tariff for FY 2019-20 on November 30, 2018. The Hon'ble Commission had issued Order on May 27, 2019 on the said Petition and approved Tariff for FY 2019-20.

Further, Regulation 12 of PSERC MYT Regulations, 2014 specifies as under:

*"**12. TRUE UP***

12.1. Truing up of the ARR of the previous year shall be carried out along with the Annual Performance Review and will be adjusted in the ARR of the next year of the control period.

12.2. Truing up of uncontrollable items and normative items shall be carried out at the end of each year of the control period.

12.3. Truing up of controllable items would be done in accordance with regulation 8.

12.4. Truing-up exercise will be undertaken only when audited accounts for the year(s) under consideration have been made available. The approved aggregate gain or loss for each business on account of controllable items will be subject to provisions of regulation 30.

12.5. In case of any change in the approved amounts (positive or negative) during the Trueup exercise, the Commission shall consider the approved carrying cost as a separate item of expense.

12.6. The Commission may allow/recover the carrying cost for the trued up amount at the interest rate mentioned in regulation 25.1:

Provided that no carrying cost shall be permitted for the period of delay in filing of true up on account of non submission of audited accounts due to the fault of the utility: Provided that if the Commission determines an over recovery by the licensee during the True-up, carrying cost for such trued up amount shall be recovered from the Applicant."

Regulation 25.1 of PSERC MYT Regulations, 2014 specifies the rate of Interest for computation of Interest on Working Capital and the same rate shall be used for computation of carrying cost of respective year after True-up.

Also, Regulation 30 of PSERC MYT Regulations, 2014 specifies as under:

*"**30. EXCESS OR UNDER RECOVERY WITH RESPECT TO NORMS AND TARGETS***

30.1. The generating company or the licensee, as the case may be, shall retain the entire gain arising from over achievement of the norms laid down by the Commission in these regulations or targets set by the Commission from time to time.

30.2. The generating company or the licensee, as the case may be, shall bear the entire losses on account of its failure to achieve the norms laid down by the Commission or targets set by the Commission, from time to time.

30.3. The gain and loss shall be considered separately for generation, transmission, SLDC and distribution businesses. The computations will be based on the data submitted by the Applicant in the Annual Performance Review and Audited Annual Accounts, at the time of True up."

Further, Regulation 13 of PSERC MYT Regulations, 2014 specifies as under:

*"**13. REVIEW AT THE END OF THE CONTROL PERIOD***

13.1. At the end of the control period, the Commission shall review the achievement of objectives and implementation of the principles of MYT laid down in these regulations.

13.2. To meet the objectives of the Act, the National Electricity Policy and Tariff Policy, the Commission may revise the principles of MYT for the subsequent control period.

*13.3. **The end of the first control period shall be the beginning of the second control period.** The Applicant shall follow the same procedure for the next control period unless required otherwise by the Commission. The Commission shall analyse the performance with respect to the norms set out at the beginning of the control period in the MYT order and shall determine the base values for the next control period, based on actual performance achieved, expected improvement and other relevant factors" **(emphasis added)***

In line with the above provisions of regulations, PSTCL is filing for True-up of ARR for FY 2018-19 and Annual Performance Review for FY 2019-20.

PSTCL further submits that submissions made in the present Petition are without prejudice to appeals pending before Higher courts.

1.3 Submission of MYT Petition for FY 2020-21 to FY 2022-23

Under the powers vested with it under Section 181 of the Act and in compliance to Section 61 of the Act, the Hon'ble Commission notified the PSERC (Terms and Conditions for Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2019 (herein after referred as "PSERC MYT Regulations, 2019") on May 29, 2019. The effective date of enforcement of these Regulations is from April 1, 2020 and the three-year Multi Year Tariff ("MYT") Control Period shall be from FY 2020-21 to FY 2022-23.

The Hon'ble Commission has mandated the submission of Business Plan along with Capital investment Plan as per Regulation 9 of PSERC MYT Regulations, 2019, prior to the approval of Multi Year Tariff Petition. Accordingly, PSTCL has filed a Petition (Petition No. 19 of 2019) for approval of Capital Investment Plan and Business Plan for the Control Period from FY 2020-21 to FY 2022-23 on August 30, 2019. The said Petition is pending before the Hon'ble Commission for approval.

Further, Regulation 10 of the PSERC MYT Regulations, 2019 specifies as under:

> *"**10. MULTI YEAR TARIFF APPLICATION***
>
> *10.1. The Applicant shall make an application for the Multi Year Tariff on or before 30th November of the year preceding the first year of Control Period.*
>
> *10.2. The Applicant shall submit **the forecast of Aggregate Revenue Requirement for each year of the Control Period and tariff proposal for the first Year of the Control Period**, in a manner as provided in these Regulations and in formats specified by the Commission from time to time. The application shall be accompanied by such fee payable, as may be specified by the Commission in the PSERC (Fee) Regulations 2005 as amended from time to time.*
>
> *Provided that the application shall also be accompanied by the true-up Petition based on the latest available audited accounts and the Annual Performance Review for the*

current Year based on the actual performance during the first six Months of the Year and estimates for the subsequent six Months.

10.3. The Applicant shall develop the forecast of Aggregate Revenue Requirement using the assumptions relating to the behaviour of individual variables that comprise the Aggregate Revenue Requirement during each year of the Control Period, including inter-alia detailed category-wise sales and demand projections, power procurement plan, trajectories of parameters specified in these Regulations and Business Plan, in accordance with guidelines and formats, as may be specified by the Commission from time to time.

… … …

10.6. The Applicant shall provide full details supporting the forecast, including but not limited to details of past performance, proposed initiatives for achieving efficiency or productivity gains, technical studies, contractual arrangements and/or secondary research, to enable the Commission to assess the reasonableness of the forecast.

10.7. The Applicant shall publish its application filed for Multi Year Tariff / Annual Revenue Requirements as required by Conduct of Business Regulations. The Applicant shall also display the application on its official website."

In view of the above, PSTCL files the present Multi Year Tariff Petition for Control Period from FY 2020-21 to FY 2022-23. Hon'ble Commission vide letter No. PSERC/Tariff/1863 dated November 15, 2019 directed PSTCL to submit the MYT Petition based the figures submitted in Capital Investment Plan Petition. Accordingly, PSTCL submits the present MYT Petition based on Capital Investment Plan submitted before the Hon'ble Commission.

1.4 Contents of the Petition

The present Petition consists of following Chapters as outlined below:

Chapter 1 – Introduction (present Chapter)

Chapter 2 - True-up of ARR for FY 2018-19: In this Chapter, the Petitioner submits the ARR for Transmission Business and SLDC, based on the actual expenses and income as per the audited annual accounts for FY 2018-19. In this Chapter, the Petitioner has also presented its submissions regarding certain critical aspects influencing the true-up of expenses for FY 2018-19.

Chapter 3 – Annual Performance Review for FY 2019-20: In this Chapter, the Petitioner has submitted the Annual Performance Review (APR) for FY 2019-20 for Transmission Business and SLDC based on actual values for first half and estimated values for second half of the year. In this Chapter, the Petitioner has also presented its submissions regarding certain critical aspects influencing the determination of APR for FY 2019-20.

Chapter 4 – ARR for Control Period from FY 2020-21 to FY 2022-23: In this Chapter, the Petitioner has submitted the ARR for Transmission Business and SLDC for Control Period from FY 2020-21 to FY 2022-23 in line with PSERC Tariff Regulations, 2019. In this Chapter, the Petitioner has also presented its submissions regarding certain critical aspects influencing the determination of ARR for the Control Period.

Chapter 5 - Proposed Tariff for FY 2020-21: In this Chapter, the Petitioner has submitted the proposed Tariff for Transmission Business and SLDC for FY 2020-21, considering the projected ARR for the Control Period and past revenue gaps.

Chapter 5 – Prayers: This Chapter details the prayers made by PSTCL in the present Petition.

Chapter 6 – Directives: This Chapter includes the status and compliance of directives issued by the Hon'ble Commission in the past Tariff Orders.

2 True-up of ARR for FY 2018-19

2.1 Background

The Hon'ble Commission in its Tariff Order dated April 19, 2018 approved total Aggregate Revenue Requirement (ARR) for PSTCL of Rs. 1281.99 Crore, including Net ARR of Rs. 18.36 Crore for SLDC for FY 2018-19.

Further, Hon'ble Commission vide Order dated May 27, 2019 approved the revised Net ARR FY 2018-19 of Rs. 1302.86 Crore for PSTCL, including net ARR of Rs. 19.75 Crore for SLDC for FY 2018-19.

In the present Petition, the Petitioner has submitted the True-up of ARR for FY 2018-19 based on the audited accounts for FY 2018-19. The Petitioner also submits its rationale for the key heads of expenditure, which critically impact its overall financial health. This Chapter further describes the various components of ARR as well as the performance of PSTCL during FY 2018-19 for Transmission business and SLDC.

2.2 Description of the Transmission System

The details of the transmission system of PSTCL as on April 1, 2018 to March 31, 2019 are tabulated below:

Table 1: Transmission System of PSTCL during FY 2018-19

Sr. No.	Particulars	Opening (As on 1st April 2018)	Addition during the year	Retirement during the year	Closing (As on 31st March 2019)
Transmission Lines (Circuit-kms)					
1	400 kV	1,599.75	-	-	1,599.75
2	220 kV	6,781.61	360.28	-	7,141.88
3	132 kV	3,135.64	-	-	3,135.64
	Total	**11,516.99**	**360.28**	**-**	**11,877.27**
Substations (Nos.)					
1	400 kV	5	-	-	5

Sr. No.	Particulars	Opening (As on 1st April 2018)	Addition during the year	Retirement during the year	Closing (As on 31st March 2019)
2	220 kV	96	4	-	100
3	132 kV	69	-	3	66
	Total	**170**	**4**	**3**	**171**
Transmission Substation Bays (Nos.)					
1	400 kV	41	2	-	43
2	220 kV	704	21	-	725
3	132 kV	280	-	5	275
4	66 kV	590	11	4	597
5	33kV	4	-	-	4
	Total	**1,619**	**34**	**9**	**1,644**
Substation Capacity (MVA)					
1	Substation Capacity	34954.17	1696.50	161	36,489.67

2.3 Transmission System Availability

The Petitioner submits that the overall Transmission System Availability for FY 2018-19, as certified by Chief Engineer SLDC, (copy attached as per Annexure 1). The following table provides the transmission system availability for each month of FY 2018-19:

Table 2: Transmission System Availability for FY 2018-19

Sr. No.	Month	Transmission System Availability (%)
1	Apr-18	99.9764%
2	May-18	99.9643%
3	Jun-18	99.9575%
4	Jul-18	99.9704%
5	Aug-18	99.9821%
6	Sep-18	99.9806%
7	Oct-18	99.9876%
8	Nov-18	99.9853%
9	Dec-18	99.9908%
10	Jan-19	99.9458%
11	Feb-19	99.7468%
12	Mar-19	99.9869%

The actual Transmission System Availability for FY 2018-19 is more than the target normative availability of 99%. The incentive on account of achievement of Transmission System Availability is discussed subsequently in this Chapter.

2.4 Transmission Losses

The actual transmission losses for FY 2018-19 are as under:

Table 3: Actual Transmission Loss for FY 2018-19

Sr. No.	Particulars	FY 2018-19
1	Energy Input (MU)	58,824.90
2	Energy Output (MU)	57,137.69
3	Transmission Loss (MU)	1687.22
4	Transmission Loss (%)	2.86%

2.5 O&M Expenses

Regulation 26 of PSERC MYT Regulations, 2014, and its subsequent first amendment specifies as under:

*"**26. OPERATION AND MAINTENANCE (O&M) EXPENSES)***

26.1. The O&M expenses for the nth year of the Control Period shall be approved based on the formula shown below:

O&Mn = (R&Mn + EMPn + A&Gn) x (1-Xn)

Where,

…

(iii) Xn is an efficiency factor for nth year

The value of Xn shall be determined by the Commission in its first MYT order for the Control Period."

In view of above said Regulation, PSTCL makes its submission of Employee Costs, R&M and A&G Expenses as under:

2.5.1 Employee Costs

In the Tariff Petition for FY 2018-19, PSTCL claimed Employee Costs of Rs. 533.54 Crore for Transmission business and Rs. 8.14 Crore for SLDC. As against this, the

Hon'ble Commission had approved employee costs of Rs. 445.72 Crore for Transmission and Rs. 6.95 Crore for SLDC. In the APR for FY 2018-19, PSTCL submitted revised estimates for employee cost as Rs 488.86 Crore for Transmission business and Rs 6.86 Crore for SLDC business. However, Hon'ble Commission has approved the employee costs as Rs 477.79 Crore for Transmission and Rs 6.57 Crores for SLDC for FY 2018-19.

Actual Employee Costs

The Petitioner submits the actual Employee Costs of Rs. 466.36 Crore for Transmission Business and Rs. 6.25 Crore for SLDC, as per audited accounts for FY 2018-19. The actual expenses include the Terminal benefits of Rs. 295.95 Crore for Transmission Business and Rs. 0.13 Crore for SLDC as per audited accounts.

Computation of Normative Employee Cost

First Amendment of PSERC MYT Regulations, 2014 dated February 3, 2016 specifies as under:

> "*Clause 26.1 of regulation 26 shall be substituted as under:*
>
> *26.1. The O&M expenses for the nth year of the Control Period shall be approved based on the formula shown below:*
>
> *O&Mn = (R&Mn + EMPn + A&Gn) x (1-Xn)*
>
> *Where,*
>
> *…*
>
> *(ii) EMPn = (EMPn-1)*(INDEX n/INDEX n-1)*
>
> - *INDEXn - Inflation Factor to be used for indexing the Employee Cost.*
> - *This will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) of nth year and shall be calculated as under:-*
>
> *INDEXn = 0.50*CPIn + 0.50*WPIn*
>
> *'WPIn' means the average rate (on monthly basis) of Wholesale Price Index (all commodities) over the year for the nth year.*
>
> *'CPIn' means the average rate (on monthly basis) of Consumer Price Index (Industrial workers) over the year for the nth year.*
>
> *…*
>
> *Note 4: Terminal Liabilities such as death-cum-retirement gratuity, pension, commuted pension, leave encashment, LTC, medical reimbursement including fixed*

medical allowance in respect of pensioners will be approved as per the actuals paid by the Applicant.

Note 5: O&M expenses made on account of extraordinary situations (if any) shall be submitted to Commission for its approval. Such expenses shall be filed separately and will not be subjected to provisions of Regulation 30. The approved amount by the Commission shall be trued up in the Annual Performance Review.

Note 6: Exceptional increase in employee cost on account of pay revision etc. will be considered separately by the Commission.

Note 7: Any expenditure on account of license fee, initial or renewal, fee for determination of tariff and audit fee shall be allowed on actual basis, over and above the A&G expenses approved by the Commission.

…"

PSTCL has considered the actual Terminal Benefits as per audited accounts, except the provision for gratuity and leave encashment for employees recruited by PSTCL. Accordingly, PSTCL has considered the Terminal Benefits of Rs. 291.88 Crore for Transmission Business and Rs. 0.13 Crore for SLDC.

PSERC MYT Regulations, 2014 provides for payment of terminal liabilities on the principle of *Pay as you go* basis.

PSTCL has computed the Employee cost on normative basis. The Petitioner has considered Gross Other Employee Cost of Rs. 219.76 Crore for FY 2017-18 for Transmission Business as base expenses after adding capitalised employee costs of Rs. 39.08 Crore, as per audited accounts. Since, no employee cost has been capitalised for SLDC for FY 2017-18, the Petitioner has considered the Other employee cost of Rs. 6.38 Crore for FY 2017-18 for SLDC as base expenses as per audited accounts.

The Hon'ble Commission may appreciate that the normative Employee expenses to be permitted should be at gross level only, as the expense capitalisation depends on capital projects undertaken and staff or employees of PSTCL dedicated to such project execution.

For example, in case the normative Employee expenses are allowed on a net of capitalization taking a base year but actual capitalisation of that respective year is different from that of base year, then the normative allowance would be lower/higher because these may not be exactly same as of the current year. In some years, the capitalization may be very high due to several capital projects being taken up by the licensee whereas; in some years it may be negligible due to very fewer capital projects taken up. The expense capitalised, therefore, is a factor which varies unpredictably, and normative Employee expense should be provided at gross level only. The Petitioner respectfully submits that the actual expense capitalized can only be considered in ARR.

The Petitioner has computed the Normative employee costs for FY 2018-19 as shown in the following table:

Table 4: Computation of Normative Employee Costs for FY 2018-19 (Rs. Crore)

Sr. No.	Particulars	Transmission	SLDC	PSTCL
1	Gross Other Employee Cost for FY 2017-18	219.76	6.38	226.14
2	Escalation Factor *(CPI:WPI::50:50)*	4.89%	4.89%	4.89%
3	Gross Other Employee Cost for FY 2018-19	230.50	6.69	237.19
4	Less: Employee cost capitalised	39.65	0.00	39.65
5	Net Other Employee Cost	190.84	6.69	197.54
6	Terminal Benefits	291.88	0.13	292.01
7	Normative Employee Cost	**482.73**	**6.82**	**489.55**

2.5.2 R&M and A&G Expenses

In Tariff Order for FY 2018-19, Hon'ble Commission had approved R&M and A&G Expenses of Rs. 60.74 Crore for Transmission Business and Rs. 2.85 Crore for SLDC. In the APR for FY 2018-19, the Petitioner submitted revised estimates for R&M and A&G expenses as Rs. 64.89 Crore for Transmission business and Rs. 1.67 Crore for SLDC business. As against this, the Hon'ble Commission had approved R&M and A&G expenses of Rs. 50.29 Crore for Transmission and Rs. 1.60 Crore for SLDC in APR for FY 2018-19.

The actual R&M and A&G expenses incurred, as per the audited annual accounts for FY 2018-19 are provided as below:

Table 5: R&M and A&G Expenses for FY 2018-19 (Rs. Crore)

Sr. No.	Particulars	Transmission	SLDC	PSTCL
1	R&M Expenses	33.10	0.43	33.53
2	A&G Expenses	24.95	0.93	25.88
3	**R&M and A&G Expenses**	**58.05**	**1.36**	**59.41**

PSERC MYT Regulations, 2014 specifies the R&M and A&G expenses on normative basis. Accordingly, based on actual Capitalisation and Capital Expenditure for FY 2018-19 as per audited accounts, PSTCL has reworked the Normative R&M and A&G Expenses for FY 2018-19 as per Regulation 26 of PSERC MYT Regulations, 2014, as amended from time to time.

Hon'ble Commission, while undertaking true-up for FY 2017-18 has approved k-factor of 0.496% for Transmission Business and 7.293% for SLDC. PSTCL has considered the same k-factor for computing the normative O&M Expenses for FY 2018-19.

Further, PSTCL submits that assets funded through Contributory Works of Rs. 20.29 Crore and Government grant under PSDF Scheme of Rs. 3.36 Crore were added in fixed assets in FY 2018-19. These assets are operated and maintained by PSTCL. Therefore, PSTCL has considered the impact of these assets in Gross Fixed Assets for FY 2018-19 for computing R&M and A&G Expenses. Accordingly, PSTCL has submitted combined Normative R&M and A&G expenses for Transmission and SLDC Business as under:

Table 6: Normative R&M and A&G Expenses for FY 2018-19 (Rs. Crore)

Sr. No.	Particulars	Transmission	SLDC	PSTCL
	Transmission Business			
1	Opening GFA	9444.25	18.57	9462.82
2	Closing GFA	9778.82	17.44	9796.26

Sr. No.	Particulars	Transmission	SLDC	PSTCL
3	Escalation Factor (*Increase in WPI Index)*	4.32%	4.32%	
4	k-factor	0.496%	7.293%	
5	**R&M and A&G Expenses**	**49.73**	**1.37**	**51.11**
6	Add: Audit Fee	0.17	-	0.17
7	Add: Licence Fee and ARR Fee	0.50	-	0.50
8	**Grand Total**	**50.40**	**1.37**	**51.78**

The Petitioner requests Hon'ble Commission to allow normative R&M and A&G Expenses as submitted above.

O&M Expenses

Further, it is noted that Note 3 of Regulation 26.1 of PSERC MYT Regulations, 2014 specifies as under:

> *"Note 3: O&M expenses shall be allowed on normative basis and shall not be trued up:*
> *Provided, if actual O&M expenses are less than 90% of the normative expenses, the Commission shall true up the O&M expenses during the Annual Performance Review for that year on actual basis."*

The normative O&M Expenses are computed as Rs. 541.32 Crore (Rs. 489.55 Crore as Employee Cost & Rs. 51.78 Crore as R&M and A&G expenses) for FY 2018-19. As against this the actual O&M Expenses are Rs. 532.02 Crore (Rs. 472.61 Crore as Employee Cost & Rs. 59.41 Crore as R&M and A&G expenses) for FY 2018-19 as per audited accounts. The actual expenses are more than 90% of normative expenses. Hence, PSTCL requests Hon'ble Commission to approve normative O&M Expenses for FY 2018-19.

2.6 Investment and Capital Expenditure

The Petitioner submits that Opening Capital Work in Progress for FY 2018-19 as per audited accounts is Rs. 451.80 Crore. The Petitioner had made Investment of Rs.

261.74 Crore during FY 2018-19 and; out of this an amount of Rs. 362.39 Crore has been capitalised and transferred to Fixed Assets. The remaining investment was carried over as Capital Work in Progress to the next year.

The Capital Expenditure of Rs. 24.62 Crore was funded through Contributory Works and works under PSDF scheme in FY 2018-19. Since these assets funded through Contributory Works and works under PSDF scheme were capitalised in FY 2018-19, PSTCL has excluded the Depreciation on these assets funded through Contributory Works in FY 2018-19. The Capital Expenditure to the extent of Rs. 24.62 Crore on the assets funded through Contributory Work in FY 2018-19 has not been considered for funding through Equity or Loans in FY 2018-19.

The details for Capital Investment for Transmission and SLDC are shown in the following table:

Table 7: Capital Investment for FY 2018-19 (Rs. Crore)

Sr. No.	Particulars	Transmission	SLDC	PSTCL
1	Opening Capital work in progress	445.87	5.93	451.80
2	Add: Addition of Capital Expenditure during the year	257.28	4.46	261.74
3	Less: Transferred to fixed assets during the year	361.93	0.46	362.39
4	Less: Assets transferred to PSPCL	6.27	-	6.27
5	Closing Capital Works in progress	334.96	9.93	344.89

The scheme wise details of capital expenditure FY 2018-19 are attached as Annexure 2.

2.7 Funding of Capital Expenditure

The Petitioner submits that during FY 2018-19, it has incurred the Capital Expenditure of Rs. 261.74 Crore, including Capital Expenditure of Rs. 24.62 Crore for Contributory Works and works for PSDF Scheme. As per the methodology adopted by Hon'ble Commission in previous Orders, PSTCL undertook funding of 30% of Capital Expenditure after excluding the Capital Expenditure towards contributory works, i.e., Rs. 71.14 Crore, through equity for FY 2018-19. The remaining Capital Expenditure of Rs. 165.99 Crore in FY 2018-19 was funded by availing loans from Banks/Financial Institutions.

2.8 Depreciation

Regulation 21 of the PSERC MYT Regulations, 2014, as amended on February 3, 2016 and August 8, 2018, specifies as under:

"21. DEPRECIATION

For the purpose of tariff, depreciation shall be computed in the following manner:

21.1. The value base for the purpose of depreciation shall be the capital cost of the assets admitted by the Commission:

Provided further that Govt. grants and consumer contribution shall also be recognized as defined under Indian Accounting Standard 20 (IND AS 20) notified by the Ministry of Corporate Affairs

Provided that land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset;

Provided further that depreciation shall be calculated after deduction of consumer contributions, capital subsidies/ Government grants.

Provided further that Govt. grants and consumer contribution shall also be recognized as defined under Indian Accounting Standard 20 (IND AS 20) notified by the Ministry of Corporate Affairs.

21.2. The cost of the asset shall include additional capitalization.

21.3. The cost shall include foreign currency funding converted to equivalent rupees at the exchange rate prevalent on the date when foreign currency shall actually be availed but not later than the date of commercial operation.

21.4. Depreciation for generation and transmission assets shall be calculated annually as per straight line method over the useful life of the asset at the rate of depreciation specified by the Central Electricity Regulatory Commission from time to time.

21.5. Depreciation for distribution assets and other assets not specified by CERC shall be at the rates notified by the Commission:

Provided that the total depreciation during the life of the asset shall not exceed 90% of the original cost;

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation/ put in use of the asset shall be spread over the balance useful life of the assets;

Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site.

21.6. Depreciation shall be chargeable from the first year of commercial operation/asset is put in use. In case of commercial operation of the asset/put in use of asset for part of the year, depreciation shall be charged on pro rata basis. "

Hon'ble Commission in Tariff Order for FY 2018-19 approved the Depreciation of Rs. 298.55 Crore for Transmission business and Rs. 1.74 Crore for SLDC for FY 2018-19. Further, the Petitioner, in APR of FY 2018-19, revised the projected depreciation charges as Rs. 291.37 Crore for Transmission and Rs. 1.15 Crore for SLDC. As against this, Hon'ble Commission approved the depreciation charges of Rs. 279.16 Crore for Transmission business and Rs. 1.08 Crore for SLDC in APR for FY 2018-19.

Accordingly, for the purpose of True-up of FY 2018-19, the Petitioner submits the details of depreciation as per the annual audited accounts for FY 2018-19, after excluding depreciation towards impairment loss. PSTCL has also not considered any Depreciation on account of assets funded through Contributory Works and works under PSDF Scheme in FY 2018-19.

Table 8: Depreciation for FY 2018-19 (Rs. Crore)

Sr. No.	Particulars	Transmission	SLDC	PSTCL
1	Opening GFA (net of land and land rights)	6,523.17	12.96	6,536.13
2	Addition of GFA	364.33	0.49	364.82
3	Retirement of GFA	30.81	0.68	31.49
4	Closing GFA	6,856.69	12.76	6,869.45
5	Depreciation	275.69	0.43	276.12

The Petitioner requests the Hon'ble Commission to approve the Depreciation as per the Table above, based on the audited accounts for FY 2018-19.

2.9 Interest Charges

Regulation 24 of the PSERC MYT Regulations, 2014, specifies as under:

*"**24. INTEREST ON LOAN CAPITAL***

24.1. For existing loan capital, interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the actual rate of interest and the schedule of repayment as per the terms and conditions of relevant agreements. The rate of interest shall be the actual rate of interest paid/payable (other than working capital loans) on loans by the licensee or the State Bank of India Advance Rate as on April 1 of the relevant year, whichever is less.

24.2. Interest and finance charges on the actual loan capital for new investments shall be computed on the loans, duly taking into account the actual rate of interest and the schedule of repayment as per the terms and conditions of relevant agreements. The rate of interest shall be the actual rate of interest paid/payable (other than working capital loans) on loans by the licensee or the State Bank of India Advance Rate as on April 1 of the relevant year, whichever is less.

24.3. The repayment for each year of the tariff period shall be deemed to be equal to the depreciation allowed for the corresponding year. In case of de-capitalisation of assets, the repayment shall be adjusted by taking into account cumulative depreciation made to the extent of de-capitalisation.

24.4. The Commission shall allow obligatory taxes on interest, finance charges (including guarantee fee payable to the Government) and any exchange rate difference arising from foreign currency borrowings, as finance cost.

24.5. The interest on excess equity treated as loan shall be serviced at the weighted average interest rate of actual loan taken from the lenders."

Hon'ble Commission in Tariff Order for FY 2018-19 had approved the Interest Charges of Rs. 352.94 Crore for Transmission business and Rs. 1.68 Crore for SLDC for FY 2018-19. Further, the Petitioner, in APR of FY 2018-19, revised the projected Interest Charges as Rs. 375.18 Crore for Transmission business and Rs. 0.82 Crore for SLDC. As against this, the Hon'ble Commission in APR for FY 2018-19 has approved the Interest Charges of Rs. 345.56 Crore for Transmission business and Rs. 0.75 Crore for SLDC for FY 2018-19.

The Hon'ble Commission in its MYT Order dated October 23, 2017, had disallowed Rs. 60.00 Crore from State Bank of Patiala and Rs. 67.74 Crore from Bank of India during True up of FY 2014-15 and Rs. 70.71 Crore from Bank of India in True Up of FY 2015-16 stating that the loans were not of the nature of long-term loans. Further

In the Tariff Order dated April 19, 2018, the Hon'ble Commission has disallowed the interest charges on loans to the extent of Rs. 50 Crore for Transmission business and Rs. 0.75 Crore for SLDC in True up of FY 2016-17,. This has led to total disallowance of Loans of Rs. 249.20 Crore for PSTCL. On the one hand, Hon'ble Commission has not considered such loans, although there was addition to fixed assets/WIP, while on the other hand, Hon'ble Commission has also not considered any equity infusion for funding of such capital expenditure.

It is pertinent to mention that Hon'ble Commission, while undertaking True-ups, of the past years have not considered above loans but while allowing interest, the repayment of above loans during FY 2016-17 & FY 2017-18, an amount of Rs. 20.23 Crore and Rs. 36.85 Crore respectively have been considered. The repayment of above said loans during FY 2018-19 is Rs 38.77 Crore. Thus, Hon'ble Commission is not allowing the actual interest on the loans already approved for Capex

Thus, PSTCL prays to Hon'ble Commission to allow interest on repayments which were considered by Hon'ble Commission on disallowed loans on account of consideration of higher repayment amount in past years.

For the purpose of the true-up for FY 2018-19, PSTCL has considered the opening balance of loan for FY 2018-19 equal to closing balance of loan for FY 2017-18 submitted in True-up Petition for FY 2017-18. The Petitioner has considered the Interest Charges based on Audited Accounts and actual loan taken against the investment done during FY 2018-19.

The source wise long-term loan outstanding and interest charges for PSTCL for FY 2018-19 is shown in the following table:

Table 9: Interest Charges for FY 2018-19 (Rs. Crore)

Sr. No.	Name of Source	Opening Balance as on April 1, 2018	Loan Received	Loan Repaid	Closing Balance as on March 31, 2019	Interest Charges
1	LIC	11.13	-	11.13	-	0.36
2	REC	2,891.41	94.20	255.61	2,730.00	285.79

Sr. No.	Name of Source	Opening Balance as on April 1, 2018	Loan Received	Loan Repaid	Closing Balance as on March 31, 2019	Interest Charges
3	SBI	23.22	50.00	15.22	58.00	1.80
4	NABARD	211.39	7.70	15.53	203.56	20.78
5	PSPCL	7.59	-	-	7.59	-
6	PFC-2	495.57	-	-	495.57	48.07
7	GPF	109.78	-	21.96	87.82	7.76
8	Bank of India	165.68	-	22.87	142.81	15.74
9	PFC -1	91.84	-	-	91.84	9.09
10	IOB	-	14.09	2.35	11.74	0.82
11	Loan for SLDC	7.62	-	0.33	7.29	0.77
12	**Total loan for PSTCL**	**4,015.23**	**165.99**	**344.99**	**3,836.22**	**390.98**
13	*Less:* Interest capitalized					28.99
14	*Add:* Miscellaneous interest/finance charges					0.22
15	*Add:* Guarantee Charges					3.40
16	**Net Total**					**365.61**

The Petitioner prays the Hon'ble Commission to approve the Interest Charges Rs. 364.84 Crore for Transmission Business and Rs. 0.77 Crore for SLDC for FY 2018-19 after True-up.

2.10 Return on Equity

Regulation 20 of the PSERC MYT Regulations, 2014, specifies as under:

> ***"20. RETURN ON EQUITY***
>
> *Return on Equity shall be computed at the rate of 15.5% on the paid up equity capital determined in accordance with regulation 19:*
>
> *Provided that assets funded by consumer contributions, capital subsidies/Govt. grants shall not form part of the capital base for the purpose of calculation of Return on Equity."*

Hon'ble Commission in Tariff Order had approved the Return on Equity of Rs. 115.64 Crore for FY 2018-19. Further, Petitioner, in APR of FY 2018-19, revised the Return on Equity as Rs. 117.60 Crore. Against this, Hon'ble Commission in APR for FY 2018-19 has approved the Return on Equity of Rs. 114.94 Crore for PSTCL.

PSTCL submits that it has partly funded the Capital Expenditure (30% for Capital Expenditure) through equity infusion in FY 2018-19, by reinvesting the RoE allowed in previous year. The equity addition has been considered as Rs. 71.14 Crore as discussed in earlier Section of this Chapter. Further, it is noted that some of assets, such as furniture and fixture and office equipment are directly capitalised and not included in capital investment plan approved by Hon'ble Commission. PSTCL submits that these assets have been funded through equity during FY 2018-19. In view of this, the additional addition of equity of Rs. 2.45 Crore has been considered. Hence, total equity addition has been considered as Rs. 73.58 Crore for FY 2018-19.

For the purpose of calculating Return on Equity for FY 2018-19 on normative basis, PSTCL has considered the RoE at the rate of 15.50% in accordance with the PSERC MYT Regulations, 2014. The Petitioner computed the normative RoE for FY 2018-19 is provided below:

Table 10: Normative Return on Equity for FY 2018-19 (Rs. Crore)

Sr. No.	Particulars	PSTCL
1	Equity at the opening of FY 2018-19	702.80
2	Addition of equity during the year	73.58
3	Equity at the closing of FY 2018-19	776.39
4	Rate of Return (%)	15.50%
5	**Return on Equity**	114.64

Therefore, PSTCL prays to the Hon'ble Commission to approve the RoE of Rs. 114.64 Crore for FY 2018-19.

2.11 Interest on Working Capital

Regulation 54 of the PSERC MYT Regulations, 2014, specifies as under:

"54. INTEREST ON WORKING CAPITAL

54.1 Components of Working Capital

The Working Capital shall cover the following:

i. O&M Expenses for 1 month;

ii. Maintenance spares @ 15% of the O&M expenses;

iii. Receivables equivalent to two (2) months of fixed cost calculated on normative target availability.

54.2 Rate of Interest

The rate of interest on working capital shall be as per regulation 25.1.

Hon'ble Commission in Tariff Order for FY 2018-19 approved the Interest on Working Capital as Rs. 39.29 Crore for Transmission business and Rs. 0.62 Crore for SLDC for FY 2018-19. Further, the Petitioner, in APR of FY 2018-19, revised the projected Interest on Working Capital as Rs. 35.46 Crore for Transmission business and Rs. 0.54 Crore for SLDC. As against this, the Hon'ble Commission, in APR of FY 2018-19, has approved the Interest on Working Capital of Rs. 34.31 Crore for Transmission business and Rs. 0.43 Crore for SLDC.

For the purpose of True-up, the Petitioner has computed the Interest on Working Capital as per the provisions of PSERC MYT Regulations, 2014. The Petitioner has considered the actual weighted average rate of interest for Working Capital loans for Transmission business and SLDC. The computation of Interest on Working Capital is submitted in the following table:

Table 11: Interest on Working Capital for FY 2018-19 (Rs. Crore)

Sr. No.	Particulars	Transmission	SLDC
1	Receivables equivalent to two months of fixed cost	221.09	2.80
2	Maintenance spares @ 15% of O&M expenses	79.97	1.23
3	Operation and Maintenance expenses for one month	44.43	0.68
4	Total Working Capital (Normative)	**345.48**	**4.71**
5	Rate of Interest applied	10.40%	10.40%
6	**Interest on Working Capital**	**35.93**	**0.49**

The Petitioner prays the Hon'ble Commission to approve the Interest on Working Capital as shown in the Table above for Transmission Business and SLDC for FY 2018-19 after True-up.

2.12 ULDC Charges

Hon'ble Commission, in Tariff Order for FY 2018-19, had approved the ULDC charges of Rs. 9.93 Crore for FY 2018-19 for SLDC. Further, the Petitioner, in APR of FY 2018-19, revised the projected ULDC Charges as Rs. 10.73 Crore, and the same were approved by the Hon'ble Commission in APR for FY 2018-19. For the purpose of True-up for FY 2018-19, the Petitioner submits the actual ULDC Charges based on Audited Accounts as shown in the following Table:

Table 12: ULDC Charges for FY 2018-19 (Rs. Crore)

Sr. No.	Particulars	Transmission	SLDC	PSTCL
1	ULDC Charges - SLDC own share	-	3.64	3.64
2	ULDC Charges - BBMB share	-	1.11	1.11
3	ULDC Charges - Central Sector share	-	-	-
4	NRLDC Charges	-	2.92	2.92
5	**Total**	-	**7.68**	**7.68**

The Petitioner prays the Hon'ble Commission to approve the ULDC charges of Rs. 7.68 Crore for FY 2018-19 after True-up.

2.13 Non-tariff Income

Regulation 28 of the PSERC MYT Regulations, 2014, specifies as under:

> *"28. NON TARIFF INCOME*
> *28.1. Following components of income shall be treated as non tariff income for the generation, transmission and distribution business, as applicable:*
> *a. Meter/metering equipment/service line rentals;*
> *b. Service charges;*
> *c. Customer charges;*
> *d. Net revenue from late payment surcharge (late payment surcharge less financing cost of late payment surcharge);*

e. Miscellaneous charges (except PLEC charges);
f. Incentives from CGSs;
g. Miscellaneous receipts;
h. Interest on advances to suppliers/contractors;
i. Interest on staff loans and advances;
j. Income from trading;
k. Income from staff welfare activities;
l. Excess found on physical verification;
m. Interest on investments, fixed and call deposits and bank balances;
n. Net recovery from penalty on coal liaison agents;
o. Prior period income;
p. Income from open access charges i.e. application fee, cross subsidy surcharge, additional surcharge, transmission and/or wheeling charges, scheduling charges etc.;
q. Any other income not included above. Provided that only 50% of the „rebate for timely payment of power purchase" received by the licensee shall be considered as non –tariff income.
28.2. The Applicant shall submit full details of its forecast of non-tariff income to the Commission as a part of ARR filing
28.3. The amount received by the Applicant on account of non-tariff Income shall be deducted from the aggregate revenue requirement in calculating the net aggregate revenue requirement of Applicant's business."

In Tariff Order for FY 2018-19, Hon'ble Commission has approved the Non-tariff Income of Rs. 49.25 Crore for Transmission business and Rs. 5.41 Crore for SLDC for FY 2018-19. Further, Petitioner, in APR of FY 2018-19, revised the projected Non-tariff Income as Rs. 18.94 Crore for Transmission Business and Rs. 1.41 Crore for SLDC. As against this, the Hon'ble Commission, in APR for FY 2018-19, has approved the Non-tariff Income of Rs. 18.94 Crore for Transmission and Rs. 1.41 Crore for SLDC.

For the purpose of True-up for FY 2018-19, the Petitioner has considered the Non-tariff income as indicated in Note 28 of audited accounts. The Petitioner has not considered the income towards the certain heads wherein expenses were not allowed by Hon'ble Commission in previous Tariff Orders:

(a) Income of Rs. 2.07 Crore towards interest received on refund of income tax has not been considered because Hon'ble Commission neither allowed expenses under the head of Income Tax nor interest on amount deducted as TDS.
(b) Income of Rs. 5.66 Crore towards reversal of excess provision of impairment loss has not been considered as impairment loss was not allowed in previous year.
(c) Income of Rs. 0.47 Crore towards provision withdrawn on unserviceable / obsolete items and losses under investigation.
(d) Income of Rs. 3.03 Crore towards withdrawn of liability of property tax for FY 2014-15 has not been considered as property tax claimed during FY 2014-15 was not allowed by Hon'ble Commission in true-up.
(e) Further Petitioner has also not considered Non-tariff Income of Rs. 6.53 Crore arising out of credit balance written back, wherein expenses were not considered in previous Tariff Orders.
(f) PSTCL has considered the 50% of income of Rs. 0.15 Crore towards rebate on early payment to NRLDC, as per the provisions of Regulation 28 of PSERC MYT Regulations, 2014.

In view of the above, the Petitioner submits Non-tariff Income for FY 2018-19 as shown in the following table:

Table 13: Non-tariff Income for FY 2018-19 (Rs. Crore)

Sr. No.	Particulars	Transmission	SLDC	PSTCL
1	Non-tariff Income	17.75	0.76	18.52

Accordingly, the Petitioner prays to the Hon'ble Commission to approve the Non-tariff Income as shown in the above table for FY 2018-19 for True-up.

2.14 Other Expenses

PSTCL has considered the Other debits of Rs. 3.71 Crore for FY 2018-19 as per Note 35 of Audited accounts, excluding the provisions related to losses and value of obsolete stores.

In addition to this, PSTCL has considered Rs. 3.60 Crore as other expenses as per Note 35.1 of audited accounts. The amount is prior period expenses towards FY

2017-18 which was not claimed in FY 2017-18, however, the same has been adjusted in books of FY 2018-19 and now shown in FY 2017-18 as per the requirement of Ind AS. PSTCL submits that Rs 3.60 Crores comprises of Rs 3.41 Crore for loss on account of Fire incident occurred on April 3, 2017 at Store, Jalandhar and Rs. 0.19 Crore towards theft of materials.

2.15 Incentive on account of Transmission System Availability

In accordance with PSERC MYT Regulations, 2014, the Petitioner is eligible for incentive for over achieving the availability targets for transmission system availability which has been verified and certified by SLDC. As per PSERC MYT Regulations, 2014, the Normative Annual Transmission System Availability Factor (NATAF) for incentive computation has been considered as 99%. The net transmission charges inclusive of incentive based on fixed charges for Transmission and computation of incentive are given as per the table below.

Table 14: Incentive on account of Transmission System Availability for FY 2018-19 (Rs. Crore)

S. No.	Month	Transmission Availability (%)	Monthly Transmission Charges	Transmission charges inclusive incentive	Incentive
1	Apr-18	99.9764%	107.98	109.05	1.07
2	May-18	99.9643%	111.58	112.67	1.09
3	Jun-18	99.9575%	107.98	109.03	1.04
4	Jul-18	99.9704%	111.58	112.68	1.09
5	Aug-18	99.9821%	111.58	112.69	1.11
6	Sep-18	99.9806%	107.98	109.05	1.07
7	Oct-18	99.9876%	111.58	112.70	1.11
8	Nov-18	99.9853%	107.98	109.06	1.07
9	Dec-18	99.9908%	111.58	112.70	1.12
10	Jan-19	99.9458%	111.58	112.65	1.07
11	Feb-19	99.7468%	100.78	101.55	0.76
12	Mar-19	99.9869%	111.58	112.70	1.11
	Total		**1313.80**	**1326.51**	**12.71**

The Petitioner submits to the Hon'ble Commission to approve the incentive for transmission system availability as determined in the Table above for FY 2018-19.

2.16 Unadjusted Revenue Gap for FY 2017-18

Hon'ble Commission in Tariff Order for FY 2018-19 had approved Net ARR of Rs. 1233 Crore for FY 2017-18 after APR. The carrying cost of Rs. 7.06 Crore was also approved after True-up for FY 2016-17 to PSTCL. Accordingly, net amount of Rs. 1240.06 Crore was considered in ARR of PSPCL for FY 2017-18 towards Intra-State Transmission Charges.

Further, in Tariff Order for FY 2019-20, Hon'ble Commission has undertaken True-up for FY 2017-18. The net ARR for FY 2017-18 was approved as Rs. 1174.99 Crore. The same ARR of Rs. 1174.99 Crore was considered in ARR of PSPCL for FY 2017-18. Instead, net ARR of Rs. 1182.05 Crore (1174.99 + 7.06) should have been considered in ARR of PSPCL after considering revenue gap of Rs. 7.06 Crore, which was earlier considered as carrying cost of PSTCL on account of True up of FY 2016-17

In case of PSTCL, the net revenue surplus for FY 2017-18 has been computed as Rs. 58.01 Crore (i.e., Rs. 1233 Crore – Rs. 1174.99 Crore.) However, while considering the Transmission charges to be allowed to PSPCL, the net revenue surplus is computed as Rs. 65.07 Crore (Rs. 1240.06 Crore – Rs. 1174.99 Crore). This leads to under recovery of revenue gap of Rs. 7.06 Crore in Tariff Order for FY 2019-20.

In view of the above, PSTCL claims the unadjusted revenue gap of Rs. 7.06 Crore in ARR for FY 2018-19.

2.17 Aggregate Revenue Requirement

After considering the expenses claimed for various components of Aggregate Revenue Requirement, Net ARR for Transmission and SLDC is summarised in the following table:

Table 15: Net ARR for Transmission and SLDC for FY 2018-19 (Rs. Crore)

Sr. No.	Particulars	Transmission Business			SLDC			Transmission Business and SLDC		
		MYT Order	APR Order	True-up	MYT Order	APR Order	True-up	MYT Order	APR Order	True-up
1	Net Employee costs	445.72	477.79	482.73	6.95	6.57	6.82	452.67	484.36	489.55
2	Net R&M and A&G Expenses	60.74	50.29	50.40	2.85	1.60	1.37	63.59	51.89	51.78
3	Depreciation	298.55	279.16	275.69	1.74	1.08	0.43	300.29	280.24	276.12
4	Interest charges	352.94	345.56	364.84	1.68	0.75	0.77	354.62	346.31	365.61
5	Interest on Working Capital	39.29	34.31	35.93	0.62	0.43	0.49	39.91	34.74	36.42
6	ULDC Charges	-	-	-	9.93	10.73	7.68	9.93	10.73	7.68
7	Return on Equity	115.64	114.94	114.64	-	-	-	115.64	114.94	114.64
8	Other expenses	-	-	7.32	-	-	-	-	-	7.32
9	**Total Revenue Requirement**	**1,312.88**	**1,302.05**	**1,331.56**	**23.77**	**21.16**	**17.56**	**1,336.65**	**1,323.21**	**1,349.12**
10	Less: Non-tariff Income	49.25	18.94	17.75	5.41	1.41	0.76	54.66	20.35	18.52
11	**Gross Aggregate Revenue Requirement**	**1,263.63**	**1,283.11**	**1,313.80**	**18.36**	**19.75**	**16.80**	**1,281.99**	**1,302.86**	**1,330.60**
12	Incentive	-	-	12.71	-	-	-	-	-	12.71
13	**Net ARR**	**1,263.63**	**1,283.11**	**1,326.51**	**18.36**	**19.75**	**16.80**	**1,281.99**	**1,302.86**	**1,343.31**
14	Unadjusted Revenue Gap	-	-	7.06	-	-	-	-	-	7.06
15	**Net ARR**	**1,263.63**	**1,283.11**	**1,333.57**	**18.36**	**19.75**	**16.80**	**1,281.99**	**1,302.86**	**1,350.37**

3 Annual Performance Review for FY 2019-20

3.1 Background

In this Chapter, the Petitioner submits the Annual Performance Review for FY 2019-20. Hon'ble Commission in its MYT Order dated October 23, 2017 approved the Net ARR of Rs. 1337.15 Crore for PSTCL for FY 2019-20. Further, in Tariff Order dated May 27, 2019, Hon'ble Commission approved the Net ARR of Rs. 1329.60 Crore for PSTCL, including Net ARR of Rs. 22.24 Crore for SLDC.

The Petitioner has computed the revised estimates of ARR for FY 2019-20 based on the actual values of first half (H1 of FY 2019-20) and provisions of PSERC MYT Regulations, 2014. The deviation sought from the PSERC MYT Regulations, 2014 and its amendments has been specifically mentioned with the rationale and relaxation has been sought in in accordance with the provisions of PSERC MYT Regulations, 2014 and its amendments.

3.2 Description of the Transmission System

PSTCL has submitted the addition in transmission system based on the Capital Investment Plan submitted to Hon'ble Commission. The details of actual addition during H1 of FY 2019-20, estimated addition during H2 of the FY 2019-20 to the transmission system of PSTCL are tabulated below:

Table 16: Transmission System for PSTCL for FY 2019-20

Sr. No.	Particulars	Opening (As on 1st April 2019)	Addition in FY 2019	Withdrawal in 2019	At the end of 2019
Transmission Lines (Circuit kms)					
1	400 kV	1,599.75	0.00	0.00	1,599.75
2	220 kV	7,141.88	412.96	0.00	7554.84
3	132 kV	3,135.64	4.70	0.00	3140.34
4	**Total**	**11,877.27**	**417.66**	**0.00**	**12294.93**
Substations (Nos.)					
1	400 kV	5	0	0	5
2	220 kV	100	1	0	101
3	132 kV	66	0	1	65

Sr. No.	Particulars	Opening (As on 1st April 2019)	Addition in FY 2019	Withdrawal in 2019	At the end of 2019
4	**Total**	**171**	**0**	**0**	**171**
Transmission Substation Bays (Incoming and Outgoing) (Nos.)					
1	400 kV	43	1	0	44
2	220 kV	725	7	0	732
3	132 kV	275	1	0	276
4	66 Kv	597	7	0	604
5	33 Kv	4	0	0	4
6	**Total**	**1,644**	**16**	**0**	**1660**
Substation Capacity					
7		36,489.67	1025	0	37514.67

3.3 Transmission Losses

Hon'ble Commission, in Tariff Order for FY 2019-20, approved the Transmission Loss of 2.50% for FY 2019-20. The actual transmission loss for the period from April, 2019 to August, 2019 is as shown in the following Table:

Table 17: Actual Transmission Loss for FY 2019-20 (H1)

Sr. No.	Month	Energy Input (MWh)	Energy sent to Distribution network (MWh)	Transmission Loss (%)
1	Apr-19	44,27,377.144	431,41,29.958	2.56%
2	May-19	540,85,03.442	531,81,18.601	1.67%
3	Jun-19	719,86,77.899	699,10,35.128	2.88%
4	Jul-19	769,76,85.644	751,96,37.424	2.31%
5	Aug-19	754,71,02.722	738,86,45.513	2.10%

PSTCL has made a comparison of the prevalent transmission losses in other State Transmission Utilities in 2017-18. A comparative of the STU losses in different states is summarized below for reference:

Table 18: Comparison of Transmission Losses for FY 2017-18

S. No	State	Transmission Loss (%) Approved in the tariff order
1	Andhra Pradesh	3.17 %
2	Gujrat	3.72 %
3	Haryana	3.08 %

S. No	State	Transmission Loss (%) Approved in the tariff order
4	Maharashtra	3.30 %
5	Rajasthan	3.37 %
6	Telangana	3.08 %

As may be observed from the table above, the transmission losses in the states are in a varying range and are higher than the actual transmission losses in the state of Punjab (3.12% for 2017-18 and 2.86% in FY 19).

In this regard, it is important to appreciate the loss levels in Extra high Voltage networks of Power Grid are in the range of 4-5% and varies cross seasons. Also, it is important to note that despite being on extra high voltage levels, the loss levels in Powergrid are significantly higher in comparison to the lower voltage networks operated by PSTCL. Given the voltage levels, loading conditions and other constraints, the loss levels in PSTCL network are relatively better than similarly placed transmission companies as depicted in the table above. Further, with the addition in the proposed network, the overall losses in the system are likely to remain in the range of 3-3.50%.

Further, the transmission system is being developed for n-1 compliance in accordance with the CEA standards. Accordingly, some lines will remain underutilized which may lead to increase in no load losses thereby increasing transmission losses.

In view of the above, based on the actual stabilised data of transmission losses available, PSTCL has requested Hon'ble Commission to approve the Transmission Loss of 3.00% for FY 2019-20.

3.4 Transmission Availability

Regulation 55 of PSERC MYT Regulations, 2014 specifies the normative Annual Transmission Availability Factor of 98% for recovery of Annual Fixed Charges and 99% for incentive on account of higher Transmission Availability. The average transmission system availability from April to September 2019 (H1) based on month wise system availability up to September 2019 is as shown in the Table below:

Table 19: Transmission System Availability for FY 2019 (H1)

Sr. No.	Month	Transmission System Availability (%)
1	April-2019	99.9745%
2	May-2019	99.9707%
3	June-2019	99.9566%
4	July-2019	99.9814%
5	August-2019	99.9785%
6	September-2019	99.9820%

The Petitioner submits that it has maintained the Transmission System Availability well above the normative annual transmission availability factor up to September 2019, as mandated by PSERC Tariff Regulations, 2014.

3.5 Capital Expenditure and Capitalisation

PSTCL submits that, in accordance with Regulation 9 and 10 of PSERC MYT Regulations, 2014, it has filed Petition for approval of Capital Investment Plan (Petition No. 44 of 2016) for the Control Period from FY 2017-18 to FY 2019-20. In the said Petition, PSTCL has also submitted the Capital Expenditure for FY 2019-20 and considered spill over works.

Accordingly, the Capital Expenditure and Capitalisation proposed for FY 2019-20 is shown in the following Table:

Table 20: Capital Expenditure and Capitalisation for FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	FY 2019-20	
		Tariff Order	APR
	Transmission		
1	Opening WIP	160.46	334.96
2	Capital Expenditure	227.28	366.39
3	Capitalisation	92.21	454.18
4	Closing WIP	295.53	247.16
	SLDC		
5	Opening WIP	7.13	9.93
6	Capital Expenditure	10.00	3.47

Sr. No.	Particulars	FY 2019-20	
		Tariff Order	APR
7	Capitalisation	17.13	-
8	Closing WIP	-	13.40

In addition to the above, PSTCL has also considered the capitalisation of Rs. 14 Crore towards PSDF Scheme.

The scheme wise details of capital expenditure FY 2019-20 are submitted as Annexure 3.

3.6 Funding of Capital Expenditure

PSERC MYT Regulations, 2014 specifies the normative debt: equity ratio of 70:30. PSTCL has considered the equity amount at 30% of the capital expenditure, in accordance to the methodology followed in past Tariff Orders. The remaining funding of capital works shall be carried out by taking loans from banks and/or financial institutions. The funding of capital expenditure as proposed for FY 2019-20 is shown in the following Table:

Table 21: Funding of Capital Expenditure for FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	FY 2019-20	
		Tariff Order	Projected
	Transmission		
1	Equity	68.18	109.92
2	Debt	159.10	256.47
3	**Total**	**227.28**	**366.39**
	SLDC		
4	Equity	3.00	1.04
5	Debt	7.00	2.43
6	**Total**	**10.00**	**3.47**

3.7 O&M Expenses

Regulation 26 of the PSERC MYT Regulations, 2014 and its subsequent amendments, specify the normative computation of O&M Expenses for Control

Period from FY 2017-18 to FY 2019-20. In view of the above said Regulation, PSTCL makes its submission for Employee Costs, R&M and A&G Expenses as under:

3.7.1 Employee Costs

Hon'ble Commission, in its Order dated May 27, 2019, approved the Employee cost FY 2019-20 as Rs. 505.63 Crore as against Rs. 531.58 Crore submitted by PSTCL.

First Amendment of PSERC MYT Regulations, 2014 dated February 3, 2016 specifies the computation of Normative O&M Expenses.

Accordingly, the Employee Expenses for FY 2019-20 are computed on normative basis subsequently.

Inflation factor

Since, WPI and CPI index are available till September, 2019, the escalation index has been computed as per provisions of PSERC MYT Regulations, 2014. The increase in CPI index for the period from H1 of FY 2019-20 over H1 of FY 2018-19 works out as 7.45% and increase in WPI index as 1.76%. With weightage of 50:50, the inflation factor has been worked out as 4.61%.

Further, as per first amendment of PSERC MYT Regulations, 2014, the other Employee Cost in FY 2018-19 has to be taken as the base for computing normative Employee Cost for FY 2019-20. As discussed in earlier Chapter of this Petition, PSTCL has adopted the approach for consideration of Gross Other Employee Cost as baseline for projection purpose. The employee expenses capitalised has been deduced separately for respective year.

Accordingly, PSTCL has calculated normative Net Other Employee costs for FY 2019-20, as under:

Table 22: Other Employee Costs for FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	FY 2019-20		
		Transmission	SLDC	PSTCL
1	Base Year (FY 2018-19) Gross Other Employee Cost	230.50	6.69	237.19
2	Inflation Factor	4.61%	4.61%	
3	**Gross Other Employee Cost**	**241.12**	**7.00**	**248.12**

Sr. No.	Particulars	FY 2019-20		
		Transmission	SLDC	PSTCL
4	Less Employee Cost Capitalised	40.24	0.00	40.24
5	**Net Other Employee Costs**	**200.88**	**7.00**	**207.88**

Terminal benefits

Regulation 26 of PSERC MYT Regulations, 2014 specifies that Terminal benefits such as death-cum-retirement gratuity, commuted pension, leave encashment, LTC, medical reimbursement including fixed medical allowance in respect of pensioners shall be allowed as per actual paid by the PSTCL. In this regard, PSTCL submits that the actual pay-out on account of terminal liabilities in respect of pensioners has been considered as per Punjab Power Sector Reforms Transfer Scheme approved by the Government of Punjab.

For the purpose of the present Petition, the PSTCL has considered the Terminal benefits for employees of erstwhile PSEB of Rs. 307.10 Crore as approved in Tariff Order for FY 2019-20. The terminal liabilities of NPS for new employees recruited by PSTCL is considered as Rs. 4.80 Crore.

The terminal benefits considered by PSTCL is as shown in the following Table:

Table 23: Terminal Benefits for FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	FY 2019-20	
		Tariff Order	Projected
1	Terminal benefits for employees of erstwhile PSEB	307.10	307.10
2	Actual payments to be made towards benefit towards NPS for new employees recruited by PSTCL	-	4.80
3	**Total**	**307.10**	**311.90**

Accordingly, PSTCL has computed the revised normative Employee Costs for Transmission Business and SLDC for FY 2019-20 as shown in the Table below:

Table 24: Normative Employee Costs for FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	FY 2019-20		
		Transmission	SLDC	PSTCL
1	Net Other Employee Costs	200.88	7.00	207.88
2	Terminal Benefits	311.90	-	311.90

Sr. No.	Particulars	FY 2019-20		
		Transmission	SLDC	PSTCL
3	**Employee Cost**	**512.78**	**7.00**	**519.78**

PSTCL prays the Hon'ble Commission to approve the Normative Employee Costs as projected by PSTCL in the Table above for FY 2019-20.

3.7.2 R&M and A&G Expenses

Hon'ble Commission, in its Tariff Order dated May 27, 2019, approved R&M and A&G Expenses as Rs. 55.87 Crore for FY 2019-20 as against Rs. 72.51 Crore claimed by PSTCL.

Based on the revised submission of capital expenditure and capitalisation for FY 2019-20, the revised R&M and A&G Expenses has been computed for FY 2019-20. k-factor has been considered same as approved in Tariff Order for FY 2019-20. The inflation factor works out as 1.76%. Accordingly, PSTCL has submitted combined R&M and A&G expenses for Transmission business and SLDC as under:

Table 25: R&M and A&G Expenses for FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	FY 2019-20		
		Transmission	SLDC	PSTCL
1	Opening GFA	9778.75	17.51	9796.26
2	Closing GFA	10246.93	17.51	10264.44
3	k-factor	0.496%	7.293%	
4	Inflation factor	1.76%	1.76%	
5	**R&M and A&G Expenses**	**50.54**	**1.30**	**51.84**
6	Add: Audit Fee	0.50	-	0.50
7	Add: Licence Fee and ARR Fee	0.17	-	0.17
8	**Grand Total**	**51.21**	**1.30**	**52.51**

PSTCL prays Hon'ble Commission to approve normative R&M and A&G Expenses as computed above for FY 2019-20.

3.8 Depreciation

Hon'ble Commission, in its Order dated May 27, 2019, approved the Depreciation of Rs. 293.33 Core for FY2019-20 as against Rs. 351.20 Crore claimed by PSTCL.

Regulation 21 of the PSERC MYT Regulations, 2014, as amended from time to time, specifies provisions related to depreciation. For computation of Opening GFA as on April 1, 2019, PSTCL has considered the closing GFA (Net of land and land rights) as on March 31, 2019 as submitted for True-up for FY 2018-19. PSTCL has considered addition of GFA equivalent to capitalisation amount submitted in the present Petition, including the capitalisation towards PSDF Scheme. PSTCL has computed the weighted average depreciation rate as 4.12% for Transmission Business and 3.34% for SLDC as per the audited accounts for FY 2018-19. The depreciation has been computed by applying Wt. avg. rate of depreciation on average GFA for FY 2019-20. Accordingly, PSTCL submits the depreciation for FY 2019-20 as under:

Table 26: Depreciation for FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	FY 2019-20		
		Transmission	SLDC	PSTCL
1	Opening GFA (Net of Land and Land Rights)	6,856.69	12.76	6,869.45
2	Assets additions during the Year	468.18	-	468.18
3	Assets replacement/ retirement	-	-	-
4	Closing GFA	7,324.87	12.76	7,337.63
5	Wt. Avg. Rate of Depreciation	4.12%	3.34%	
6	**Depreciation**	**292.21**	**0.43**	**292.64**

3.9 Interest and Finance Charges on Loan Capital

Hon'ble Commission, in its Tariff Order dated May 27 2019, approved the Interest and Finance Charges of Rs. 325.84 Crore for FY 2019-20 as against Rs.367.60 Crore claimed by PSTCL.

As explained in previous Section 2.9, the Hon'ble Commission, in its earlier Tariff Orders for PSTCL has disallowed the funding of Capital Expenditure through loans which are not long term in nature, even though such loans were used for funding of Capital Expenditure. Hence, for the purpose of the present Petition, PSTCL has considered the Opening loan as on April 1, 2019 same as the Closing balance of loans for FY 2018-19 as submitted in previous Section.

Further as explained earlier in Section 2.9, the repayment of the loans not considered in past years is estimated to be Rs 31.76 Crores.

The outstanding existing loans include loans from REC, LIC, Commercial banks, Loan from PSPCL and GPF Liability. The repayment of these existing loans and interest expenses has been considered as per their repayment schedule. The addition of loan has been considered equivalent to debt amount as submitted in the present Petition. PSTCL has proposed new loans for the proposed investments from Banks/Financial Institution. Three years moratorium period has been considered for the new loan taken for funding of capital expenditure for FY 2019-20. Accordingly, interest on loan capital for FY 2019-20 for PSTCL has been submitted as under:

Table 27: Interest on Loan capital for FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	FY 2019-20		
		Transmission	SLDC	PSTCL
1	Opening Balance	3,828.93	7.29	3,836.22
2	Loan addition during year	256.47	2.43	258.90
3	Loan Repayment during year	340.95	0.35	341.30
4	Closing Balance	3,744.45	9.37	3,753.82
5	Interest Charges	376.17	0.82	377.00
6	Less: Interest Capitalised	21.05	-	21.05
7	Add: Guarantee Charges	5.30	-	5.30
8	**Interest & Finance Charges**	**360.42**	**0.82**	**361.25**

3.10 Return on Equity

Hon'ble Commission, in its Tariff Order dated May 27 2019, approved the Return on Equity of Rs. 126.46 Crore for FY 2019-20 as against Rs. 136.95 Crore claimed by PSTCL.

For computation of Return on Equity, the PSTCL has considered the closing equity for FY 2018-19 computed by PSTCL in previous Section as opening equity for FY 2019-20. PSTCL has considered the addition of equity equivalent to 30% of capital expenditure, as discussed in earlier Section of this Chapter. PSTCL has computed Return on Equity for FY 2019-20 in accordance with the above said Regulations as given in the following Table:

Table 28: Return on Equity for FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	FY 2019-20
		PSTCL
1	Opening Balance-Equity Capital	776.39
2	Equity addition during the year	110.96
3	Closing balance-Equity Capital	887.35
4	Rate of Return on Equity (%)	15.50%
5	**Return on Equity**	**128.94**

For the purpose of this Petition, PSTCL is claiming Normative RoE for FY 2019-20 as Rs 128.94 Crores. However, at time of True up of FY 2019-20, PSTCL will claim the RoE based on actual equity invested limited to 30%.

Therefore, in view of above, PSTCL prays Hon'ble Commission to allow the RoE for FY 2019-20 as shown in the Table above.

3.11 Interest on Working Capital

Hon'ble Commission, in its Tariff Order dated May 27, 2019, approved the Interest on Working Capital (IoWC) for FY 2019-20 as Rs. 35.86 Crore for PSTCL as against IoWC of Rs. 37.49 Crore for FY 2019-20 claimed by PSTCL.

PSTCL has computed the working capital requirement in accordance with the above Regulations for its Transmission Business and SLDC. The Regulation 25.1 of PSERC MYT Regulations, 2014 specifies that the rate of interest shall be equal to the weighted average rate of interest paid/ payable on loans by the licensee/SLDC or the State Bank of India Advance Rate as on April 1 of the relevant year, whichever is less. PSTCL has considered the actual weighted average rate of Interest based on actual working capital loans for H1 of FY 2019-

20. The computation of Interest on Working Capital for FY 2019-20 is shown in the following Table:

Table 29: Interest on Working Capital Expenses for FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	FY 2019-20		
		Transmission	SLDC	PSTCL
1	Receivables equivalent to two months of fixed cost	227.74	3.35	231.09
2	Maintenance spares @ 15% of O&M expenses	84.60	1.24	85.84
3	Operation and Maintenance expenses for one month	47.00	0.69	47.69
4	**Total Working Capital Requirement**	**359.34**	**5.28**	**364.63**
5	Rate of Interest	10.76%	10.76%	10.76%
6	**Interest on Working Capital**	**38.66**	**0.57**	**39.23**

3.12 ULDC Charges

Hon'ble Commission, in its Tariff Order dated May 27, 2019, approved the ULDC Charges for FY 2019-20 as Rs. 10.73 Crore at the same level as claimed by PSTCL. For the purpose of Annual Performance Review, PSTCL submits the same amount of ULDC Charges as Rs. 10.73 Crore for FY 2019-20. The actual ULDC Charges shall be submitted at time of true-up for FY 2019-20.

3.13 Non-Tariff Income

Hon'ble Commission, in its Tariff Order dated May 27. 2019, approved Non-Tariff Income of Rs.20.35 Crore for FY2019-20 as against same Non-Tariff Income for FY 2019-20 claimed by PSTCL.

For the purpose of the present Petition, PSTCL has claimed Non-tariff Income at the same level as considered for True-up for FY 2018-19 in previous Section.

Accordingly, PSTCL submitted the Non-tariff Income of Rs. 17.75 Crore for Transmission Business and Rs. 0.76 Crore for SLDC for FY 2019-20.

3.14 Summary of ARR

The summary of ARR for Transmission Business and SLDC for FY 2019-20 are shown in Tables below:

Table 30: ARR for PSTCL FY 2019-20 (Rs. Crore)

Sr. No.	Particulars	Transmission Business		SLDC		Transmission Business and SLDC	
		Tariff Order	APR	Tariff Order	APR	Tariff Order	APR
1	Net Employee costs	498.86	512.78	6.77	7.00	505.63	519.78
2	Net R&M and A&G expenses	53.34	51.21	2.53	1.30	55.87	52.51
3	Depreciation	291.67	292.21	1.66	0.43	293.33	292.64
4	Interest charges	324.48	360.42	1.36	0.82	325.84	361.25
5	Interest on Working Capital	35.26	38.66	0.60	0.57	35.86	39.23
6	ULDC Charges	-	-	10.73	10.73	10.73	10.73
7	Return on Equity	126.46	128.94	-	-	126.46	128.94
8	Total Revenue Requirement	1,330.07	1,384.22	23.65	20.85	1,353.72	1,405.07
9	Less: Non-Tariff Income	18.94	17.75	1.41	0.76	20.35	18.52
10	**Aggregate Revenue Requirement**	**1,311.13**	**1,366.47**	**22.24**	**20.09**	**1,333.37**	**1,386.55**
11	**Past Revenue Gap/(surplus)**	(3.77)	(3.77)	-	-	(3.77)	(3.77)
12	**Net ARR**	**1,307.36**	**1,362.70**	**22.24**	**20.09**	**1,329.60**	**1,382.78**

4 Forecast of ARR for MYT Control Period from FY 2020-21 to FY 2022-23

4.1 Background

In this Chapter, the Petitioner has projected the ARR for the Control Period from FY 2020-21 to FY 2022-23 in accordance with the provisions of PSERC MYT Regulations, 2019. PSTCL has considered the Capital expenditure as per Capital Investment Plan submitted before Hon'ble Commission. PSTCL craves leave to make revised submission for projection of ARR for Control Period after approval of Capital Investment Plan.

The Petitioner has also considered the basis of past trends, regulatory norms and activities planned and proposed to be taken up during the previous Control period for projecting the expenses. The deviation sought from the PSERC MYT Regulations, 2019 has been specifically mentioned with the rationale and relaxation has been sought in in accordance with the provisions of PSERC MYT Regulations, 2019.

4.2 Transmission System Availability

As per historical trends, the Transmission System Availability of transmission network of PSTCL has always remained higher than target Availability of 99%. PSERC MYT Regulations 2019, specify that the normative transmission availability (NATAF) for recovery of fixed cost shall be 98.5% and incentives shall be payable for availability above 99%. Further, no incentive shall be payable for availability beyond 99.75%.

Considering the above, PSTCL submits that the availability of the network will be aligned to the normative limits set as per Regulation 52.1 of PSERC MYT Regulations, 2019 as mentioned above.

4.3 Transmission Losses

PSTCL in its Petition for Capital Investment Plan and Business Plan filed before Hon'ble Commission has projected trajectory for Transmission Losses for Control Period from FY 2020-21 to FY 2022-23.

PSTCL reiterates that it has made a comparison of the prevalent transmission losses in other State Transmission Utilities in 2017-18. A comparative of the STU losses in different states is summarized below for reference:

Table 31: Comparison of Transmission Losses for FY 2017-18

S. No	State	Transmission Loss (%) Approved in the tariff order
1	Andhra Pradesh	3.17 %
2	Gujrat	3.72 %
3	Haryana	3.08 %
4	Maharashtra	3.30 %
5	Rajasthan	3.37 %
6	Telangana	3.08 %

As may be observed from the table above, the transmission losses in the states are in a varying range and are higher than the actual transmission losses in the state of Punjab (3.12% for 2017-18 and 2.86% in FY 19).

In this regard, it is important to appreciate the loss levels in Extra high Voltage networks of Power Grid are in the range of 4-5% and varies cross seasons. Also, it is important to note that despite being on extra high voltage levels, the loss levels in Powergrid are significantly higher in comparison to the lower voltage networks operated by PSTCL. Given the voltage levels, loading conditions and other constraints, the loss levels in PSTCL network are relatively better than similarly placed transmission companies as depicted in the table above. Further, with the addition in the proposed network, the overall losses in the system are likely to remain in the range of 3-3.50%.

Further, the transmission system is being developed for n-1 compliance in accordance with the CEA standards. Accordingly, some lines will remain underutilized which may lead to increase in no load losses thereby increasing transmission losses. Given the different schemes envisaged under the capital expenditure plan, PSTCL has proposed a constant loss level of 3% over control period from FY 2020-21 to FY 2022-23.

Table 32: Transmission Losses for FY 2020-21 to FY 2022-23

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Transmission Loss (%)	3.00%	3.00%	3.00%

4.4 Components of ARR for Transmission and SLDC Business

Regulation 15.1 of PSERC MYT Regulations, 2019 specifies the components of ARR of Transmission and SLDC Business as under:

"15.1. The ARR of the Transmission business and SLDC business shall comprise of the following components:

(a) Return on Equity;

(b) Interest and Finance Charges on Loan Capital;

(c) Interest Charges on Working Capital;

(d) Depreciation;

(e) Operation and Maintenance Expenses;

(f) ULDC Charges;

(g) Statutory levies and taxes, if any."

PSTCL has projected the components of ARR for the Control Period in subsequent sections.

4.5 Baseline values

Regulation 8.1 of PSERC MYT Regulations, 2019 specifies that baseline values for the Control Period shall be determined by the Hon'ble Commission and the projections for the Control Period shall be based on these figures. These baseline values shall be inter-alia based on figures approved by the Hon'ble Commission in the past, latest audited accounts, estimate of the expected figures for the relevant year, industry benchmarks/norms and other factors considered appropriate by the Hon'ble Commission. Also, it is specified that Hon'ble Commission may change the values for Base Year and consequently the trajectory of parameters for the Control Period, considering the actual figures from audited accounts.

As per Multi Year Tariff principles, the base year shall be previous year of first year of Control period. Hence, for Control Period from FY 2020-21 to FY 2022-23, the base year shall be FY 2019-20. It is also noted, actual values of FY 2019-20 can not be available at this stage . Hence, for the purpose of this Petition, the Petitioner relied on audited accounts for FY 2018-19. However, the Petitioner craves leave to submit the revised trajectory for control period based on audited accounts for FY 2019-20.

4.6 Capital Expenditure and Capitalisation

PSTCL has considered the capital expenditure and capitalisation for its Transmission and SLDC Business in line with the Capital Investment Plan as submitted before Hon'ble Commission and subsequent submissions made thereafter. The capital expenditure and capitalisation for the Control Period is summarised as under:

Table 33: Capital Expenditure for FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Transmission				
1	Opening CWIP	247.16	659.57	1,208.65
2	Capital Expenditure	705.26	731.48	677.30
3	Capitalisation	292.86	182.40	1,305.97
4	Closing CWIP	659.57	1,208.65	579.98
SLDC				
1	Opening CWIP	13.40	29.53	44.06
2	Capital Expenditure	24.23	16.35	12.45
3	Capitalisation	8.10	1.82	51.03
4	Closing CWIP	29.53	44.06	5.48

Further, it is clarified that the above capital expenditure does not include the capital expenditure towards Contributory works and works under PSDF Scheme. The assets addition on account of such schemes/works have been considered separately in subsequent Section.

4.7 Funding of Capital Expenditure

Regulation 19 of PSERC MYT Regulations, 2019 specifies as under:

" … … …

19.2. ***New Projects –*** *For capital expenditure projects declared under commercial operation on or after the effective date:*

(a) A Normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff;

(b) In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;

(c) In case, the actual equity employed is less than 30%, the actual debt-equity ratio shall be considered;

(d) The premium, if any raised by the Applicant while issuing share capital and investment of internal accruals created out of free reserve, shall also be reckoned as paid up capital for the purpose of computing return on equity subject to the normative debt-equity ratio of 70:30, provided such premium amount and internal accruals are actually utilized for meeting capital expenditure of the Applicant's business."

The above said regulation provides a normative debt: equity ratio as 70:30. PSTCL has been borrowing funds from SBI, PFC, REC, Bank of India and Indian Overseas Bank. The appropriate tie-ups will be made with these banks/Financial institutions along with others to make good the investments required for the capital investment plan. Accordingly, the funding of capital expenditure for Control Period for Transmission Business and SLDC is shown in the following Table:

Table 34: Funding of Capital Expenditure for FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
	Transmission			
1	Equity	211.58	219.44	203.19
2	Debt	493.68	512.04	474.11
3	**Total**	**705.26**	**731.48**	**677.30**
	SLDC			
3	Equity	7.27	4.91	3.74
4	Debt	16.96	11.45	8.72
5	**Total**	**24.23**	**16.35**	**12.45**

4.8 Return on Equity

Regulation 20 of PSERC MYT Regulations, 2019 specifies as under:

"20. RETURN ON EQUITY

Return on equity shall be computed at the base rate of 15.5% for thermal generating stations, Transmission Licensee, SLDC and run of the river hydro generating stations and at the base rate of 16.5% for the storage type hydro generating stations and run of river generating stations with pondage and 16% for Distribution Licensee on the paid up equity capital determined in accordance with Regulation 19:

Provided that Equity invested in foreign currency shall be converted to rupee currency based on the exchange rate prevailing on the date(s) it is subscribed:

Provided further that assets funded by consumer contributions, capital subsidies/Govt. grants shall not form part of the capital base for the purpose of calculation of Return on Equity."

PSTCL has considered the opening equity for FY 2020-21 equal to closing equity considered in APR for FY 2019-20. PSTCL has computed Return on Equity for the Control Period in view of the above said Regulations as given in the following table:

Table 35: Return on Equity for FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
1	Opening Equity for the year	887.35	1,106.19	1,330.54
2	Addition of Equity during the year	218.85	224.35	206.93
3	Closing Equity for the year	1,106.19	1,330.54	1,537.47
4	Rate of Return on Equity (%)	15.50%	15.50%	15.50%
5	Return on Equity	**154.50**	**188.85**	**222.27**

4.9 Income Tax

Regulation 23 of PSERC MYT Regulations, 2019 has allowed recovery of Income Tax, as part of ARR, as under:

"23.1. Obligatory taxes, if any, on the income of the Generating Company or the Licensee or the SLDC from its core/licensed business shall be computed as an expense and shall be recovered from the customers/consumers:

Provided that tax on any income other than return on equity shall not constitute a pass through component in the tariff and tax on such other income shall be payable by the Generating Company or the Licensee or the SLDC:

Provided that income tax shall be allowed as per actual income tax paid or income tax payable on return on equity, whichever is lower.

23.2. The benefits of tax holiday and the credit for carrying forward losses applicable as per the provision of the Income Tax Act, 1961 shall be fully passed on to the customers/consumers.

23.3. The penalty, if any, arising on account of delay in deposit of tax or short deposit of tax amount shall not be claimed by the Generating Company or the Licensee or the SLDC, as the case may be."

PSTCL submits that under ideal scenario, the tax payable in any year should be restricted to ROE earned during the year. However, the actual tax paid during the year may get influenced on account of the following:

- Efficiency of operations leading to gains in comparison to normative expenses
- Recovery of additional amounts from consumers on account of recovery of revenue gap of previous years

On account of the above, the overall income tax liability in any year could be higher than tax only on the ROE component allowed during the year. It is therefore requested that the actual income tax liability on such additional revenue allowed during the year should be allowed on actuals. PSTCL craves leave to submit such actual tax liability in True-up of respective year and requests the Hon'ble Commission to allow the same on actual basis.

For projection for Control Period, PSTCL has computed Income tax payable on Return on Equity as net profit of respective year. In line with the provisions of the Regulations, the overall income tax projections have been considered assuming a tax rate of 17.47% (MAT Rate) (currently considered only on the ROE component) as shown in the following Table:

Table 36: Income Tax for FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
1	Income Tax on RoE	26.99	32.99	38.83

4.10 Depreciation

Regulation 21 of the PSERC MYT Regulations, 2019 specifies as under:

"21.1. The value base for the purpose of depreciation shall be the capital cost of the assets admitted by the Commission:

Provided that the depreciation shall be allowed after reducing the approved original cost of the retired or replaced or decapitalized assets:

Provided that the land, other than the land held under lease and land for reservoir in case of hydro generating station, shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the assets:

Provided further that Govt. grants and consumer contribution shall also be recognized as defined under Indian Accounting Standard 20 (IND AS 20) notified by the Ministry of Corporate Affairs.

21.2. The residual/salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of historical capital cost of the asset:

Provided that I.T. Equipment and Software shall be depreciated 100% with zero salvage value.

21.3. The Cost of the asset shall include additional capitalization.

21.4. The Generating Company, Transmission and Distribution Licensee shall provide the list of assets added during each Year of the Control Period and the list of assets completing 90% of depreciation in the Year along with Petition for Annual Performance Review, true-up and tariff determination for ensuing Year.

21.5. Depreciation for Distribution, generation and transmission assets shall be calculated annually as per straight line method over the useful life of the asset at the rate of depreciation specified by the Central Electricity Regulatory Commission from time to time:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation/ put in use of the asset shall be spread over the balance useful life of the assets:

Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the asset.

21.6. Depreciation shall be chargeable from the first year of commercial operation/asset is put in use. In case of commercial operation of the asset/put in use of asset for part of the year, depreciation shall be charged on pro rata basis."

PSTCL has computed the depreciation in accordance with the above said Regulations. PSTCL has considered closing GFA of FY 2019-20 as opening GFA for FY 2020-21 and addition of GFA equal to projected capitalisation during each year of Control period, as submitted in earlier Section of this Chapter. In addition to the capitalisation, PSTCL has also considered the capitalisation towards PSDF scheme of Rs. 18.88 Crore for FY 2020-21, Rs. 6.36 Crore for FY 2021-22 and Rs. 50.34 Crore for FY 2022-23.

The weighted average rate of depreciation has been computed as 4.12% for Transmission Business and 3.34% for SLDC based on audited accounts for FY 2018-19. The depreciation has been computed by applying weighted average rate of depreciation on average GFA during the year. Accordingly, PSTCL submits the depreciation for the Control Period as under:

Table 37: Depreciation for FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
	Transmission Business			
1	Opening GFA	7,324.87	7,636.61	7,825.36
2	Addition of GFA	311.74	188.76	1,356.31
3	Closing GFA	7,636.61	7,825.36	9,181.67
4	Wt. Avg. Rate of Depreciation (%)	4.12%	4.12%	4.12%
5	**Depreciation**	**308.28**	**318.59**	**350.43**
	SLDC			
6	Opening GFA	12.76	20.86	22.68
7	Addition of GFA	8.10	1.82	51.03
8	Closing GFA	20.86	22.68	73.71
9	Wt. Avg. Rate of Depreciation (%)	3.34%	3.34%	3.34%
10	**Depreciation**	**0.56**	**0.73**	**1.61**

4.11 Interest and Finance Charges on Loan Capital

Regulation 24 of the PSERC MYT Regulations, 2019 specifies as under:

"24.1. For existing loan capital, interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the actual rate of interest and the schedule of repayment as per the terms and conditions of relevant agreements. The rate of interest shall be the actual rate of interest paid/payable (other than working capital loans) on loans by the Licensee.

24.2. Interest and finance charges on the future loan capital for new investments shall be computed on the loans, based on one (1) year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI as may be applicable as on 1st

April of the relevant year, plus a margin determined on the basis of current actual rate of interest of the capital expenditure loan taken by the Generating Company, Licensee or SLDC and prevailing SBI MCLR.

24.3. The repayment for each year of the tariff period shall be deemed to be equal to the depreciation allowed for the corresponding year. In case of de-capitalisation of assets, the repayment shall be adjusted by taking into account cumulative depreciation made to the extent of de-capitalisation.

24.4. The Commission shall allow obligatory taxes on interest, finance charges (including guarantee fee payable to the Government) and any exchange rate difference arising from foreign currency borrowings, as finance cost.

24.5. The interest on excess equity treated as loan shall be serviced at the weighted average interest rate of actual loan taken from the lenders.

Provided also that if there is no actual loan for a particular Year but normative loan is still outstanding, the last available weighted average rate of interest for the actual loan shall be considered."

For the purpose of projecting the interest and finance charges, PSTCL has currently considered the closing loan balances for 2019-20 as opening loan balances for FY 2020-21. The outstanding existing loans include loans from REC, LIC, Commercial banks, Loan from PSPCL and GPF Liability. The repayment of these existing loans and interest expenses has been considered as per their repayment schedule. The addition of loan has been considered equivalent to debt amount as submitted in the present Petition. PSTCL has proposed new loans for the proposed investments from Banks/Financial Institution. Three years moratorium period has been considered for the new loan taken for funding of capital expenditure for Control Period.

Further as explained earlier in Section 2.9 of this petition the repayment of the loans not considered in past years is estimated to be Rs 23.65 Crores for each year of the Control period.

Accordingly, interest on loan capital for Control Period for PSTCL has been submitted as following:

Table 38: Interest and Finance Charges for FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
	Transmission Business			
1	Opening Loan balance for the year	3,744.45	3,836.00	3,863.96
2	Addition of loan during year	493.68	512.04	474.11
3	Repayment of loan during year	402.13	484.08	483.62
4	Closing loan balance for year	3,836.00	3,863.96	3,854.45
5	Interest Charges	386.44	394.42	396.92
6	Less: Interest charges capitalised	33.89	69.64	66.19
7	Add: Guarantee Fee	10.46	10.72	9.89
8	**Interest and Finance Charges**	**363.01**	**335.50**	**340.62**
	SLDC			
9	Opening Loan balance for the year	9.37	23.62	31.76
10	Addition of loan during year	16.96	11.45	8.72
11	Repayment of loan during year	2.71	3.31	3.31
12	Closing loan balance for year	23.62	31.76	37.17
13	**Interest Charges**	**1.69**	**2.94**	**3.65**

4.12 O&M Expenses

Regulation 26 of the PSERC MYT Regulations, 2019 specifies as under:

"26.1. The O&M expenses for the nth year of the Control Period shall be approved based on the formula shown below:

$\boldsymbol{O\&M_n = (R\&M_n + EMP_n + A\&G_n) \times (1-X_n)}$

Where,

$R\&M_n$ –Repair and Maintenance Costs of the Applicant for the nth year;

EMP_n –Employee Cost of the Applicant for the nth year;

$A\&G_n$ –Administrative and General Costs of the Applicant for the nth year;

It should be ensured that all such expenses capitalized should not form a part of the O&M expenses being specified here. The above components shall be computed in the manner specified below:

(i) $R\&M_n = K*GFA*WPI_n/WPI_{n-1}$

Where,

'K' is a constant (expressed in %) governing the relationship between R&M costs and Gross

Fixed Assets (GFA) for the nth year. The value of 'K' will be specified by the Commission in the MYT order.

'GFA' is the average value of the gross fixed assets of the nth year.

WPI_n means the average rate (on monthly basis) of Wholesale Price Index (all commodities) over the year for the nth year.

(ii) $EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) *(INDEX_n/INDEX_{n-1})$

$INDEX_n$ - Inflation Factor to be used for indexing the Employee Cost and Administrative and General Costs for nth year. This will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) of nth year and shall be calculated as under: -

$INDEX_n = 0.50*CPI_n + 0.50*WPI_n$

'WPI_n' means the average rate (on monthly basis) of Wholesale Price Index (all commodities) over the year for the nth year.

'CPI_n' means the average rate (on monthly basis) of Consumer Price Index (Industrial workers) over the year for the nth year.

Note 1: The O&M expenses of BBMB for the entire Control Period shall be projected separately based on the latest actual payout. The Commission shall true-up the O&M expenses of BBMB during the Annual Performance Review based on the actual payout. The O&M expense of BBMB shall be treated as uncontrollable cost item. However, when CERC determines the tariff in respect of generating plants/units of BBMB, the Commission shall consider the same

Note 2: For the purpose of estimation, the same WPI_n and CPI_n values shall be used for all years of the Control Period. However, the Commission will consider the actual values of the WPI_n and CPI_n at the end of each year during the Annual Performance Review exercise and True-up the R&M Expenses, Employee Cost and A&G Expenses on account of this variation.

Note 3: O&M expense shall be allowed on normative basis and shall be trued-up only to the account of variation in Wholesale Price Index and Consumer Price Index.

Note 4: Terminal Liabilities such as death-cum-retirement gratuity, Ex-Gratia, pension including family pension, commuted pension, leave encashment, LTC, medical reimbursement including fixed medical allowance in respect of the State PSU / Government pensioners will be approved as per the actuals paid by the Applicant.

Note 5: O&M expenses made on account of extraordinary situations (if any) shall be submitted to Commission for its approval. Such expenses shall be filed separately and will not be subjected to provisions of Regulation 30. The amount approved by the Commission shall be trued up in the Annual Performance Review.

Note 6: Exceptional increase in employee cost on account of Pay Commission based revision for State PSU / Government employees will be considered separately by the Commission.

Note 7: Any expenditure on account of license fee, initial or renewal, fee for determination of tariff and audit fee shall be allowed on actual basis, over and above the A&G expenses approved by the Commission.

Note 8: O&M expenses of assets taken on lease/hire-purchase and those created out of the consumers' contribution shall be considered in case the Generating Company or the Licensee has the responsibility for its operation and maintenance and bears O&M expenses.

Note 9: With regard to unfunded past liabilities of pension and gratuity, the Commission will follow the principle of 'pay as you go'. The Commission shall not allow any other amount towards creating fund for meeting unfunded past liability of pension and gratuity.

Note 10: O&M expenses for gross fixed assets added during the year, if not accounted already, shall be considered from the date of commissioning on pro-rata basis.

(iii) Xn is an efficiency factor for nth year

The Value of Xn shall be determined by the Commission in it MYT order for the Control Period."

PSTCL has computed the O&M Expenses for Control period on normative basis.

Employee Cost

For projection of Employee Costs for the Control Period, the PSTCL has considered the Employee costs for FY 2019-20 as base values.

Terminal benefits

Regulation 26 of PSERC MYT Regulations, 2019 specifies that Terminal benefits such as death-cum-retirement gratuity, commuted pension, leave encashment, LTC, medical reimbursement including fixed medical allowance in respect of pensioners shall be allowed as per actual paid by the PSTCL. In this regard, PSTCL submits that the actual payout on account of terminal liabilities in respect of pensioners has been considered as per Punjab Power Sector Reforms Transfer Scheme approved by the Government of Punjab.

The employees recruited by PSTCL are covered under New Pension Scheme (NPS) and are entitled to gratuity under the provisions of the Payment of Gratuity Act, 1972 and the leave salary under the Leave Rules of the Corporation. The liability has been created for meeting the current terminal liabilities of gratuity and leave encashment in respect of employees recruited by PSTCL in compliance of AS 15 issued by the ICAI. PSTCL has considered the Terminal benefits for these employees recruited after 16 April, 2010. PSTCL has projected the Terminal Benefits for the employees of erstwhile PSEB and employees recruited by PSTCL as shown in the following Table:

Table 39: Terminal Benefits from FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
1	Terminal benefits for employees of erstwhile PSEB	322.09	328.38	335.30
2	Terminal benefits for NPS for new employees recruited by PSTCL	5.02	5.25	5.49
3	**Terminal Benefits**	327.11	333.63	340.69

For projection of other employee cost, the PSTCL has considered the Gross Employee Costs for FY 2019-20 as submitted in earlier Chapter of this Petition and employee costs capitalised has been projected for each year of the Control Period. The inflation factor has been considered as 4.61% based on CPI and WPI Index available for the period from April to September 2019. Accordingly, PSTCL has computed the Employee Costs for Transmission Business and SLDC for Control Period, 2014 as shown in the Table below:

Table 40: Employee Cost from FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
	Transmission Business			
1	Other Gross Employee Cost for previous year	241.12	252.23	263.85
2	Inflation Factor	4.61%	4.61%	4.61%
3	Other Employee Cost	252.23	263.85	276.00
4	Less: Employee Cost capitalised	40.83	41.43	42.04
5	Net Other Employee Cost (A)	211.40	222.42	233.97
6	Terminal Benefits (B)	327.11	333.63	340.79
7	**Employee Costs (A+B)**	**538.51**	**556.05**	**574.75**
	SLDC			
8	Other Gross Employee Cost for previous year	7.00	7.32	7.66
9	Inflation Factor	4.61%	4.61%	4.61%
10	Other Employee Cost	7.32	7.66	8.01
11	Less: Employee Cost capitalised	0.00	0.00	0.00

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
12	Net Other Employee Cost (A)	7.32	7.66	8.01
13	Terminal Benefits (B)	-	-	-
14	**Employee Costs (A+B)**	**7.32**	**7.66**	**8.01**

Further, the Petitioner prays to the Hon'ble Commission to approve Pay Revisions arrears which will be claimed additionally at the time of actual payment.

A&G Expenses

PSTCL has computed A&G Expenses as per provisions of PSERC MYT Regulations, 2019. It is noted that in the previous Control Period, A&G and R&M Expenses are allowed combined. Hence, for the purpose of the projection of A&G Expenses, PSTCL has considered the actual A&G Expenses for FY 2018-19 as base values.

The baseline A&G Expenses are considered as Rs. 24.95 Crore for Transmission Business and Rs. 0.93 Crore for SLDC based on audited accounts for FY 2018-19. The inflation factor has been considered as 4.61% for FY 2019-20 and FY 2020-21. Accordingly, A&G Expenses for Control Period is projected as shown in the following Table:

Table 41: A&G Expenses from FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
	Transmission Business			
1	A&G Expenses for previous year	26.10	27.31	28.56
2	Inflation Factor	4.61%	4.61%	4.61%
3	A&G Expenses for nth year	**27.31**	**28.56**	**29.88**
4	Add: Licence Fee and Tariff determination Fee	0.50	0.50	0.50
5	Add: Audit Fee	0.17	0.17	0.17
6	Total A&G Expenses	**27.97**	**29.23**	**30.55**
	SLDC			
7	A&G Expenses for previous year	0.97	1.01	1.06
8	Inflation Factor	4.61%	4.61%	4.61%
9	A&G Expenses for nth year	**1.01**	**1.06**	**1.11**

R&M Expenses

PSTCL has computed R&M Expenses as per PSERC MYT Regulations, 2019. The k-factor has been computed based on actual R&M Expenses of FY 2018-19 as Rs. 33.10 Crore for Transmission Business and Rs. 0.43 Crore for SLDC as shown in the following Table:

Table 42: k-factor from FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	Transmission	SLDC
1	Opening GFA for FY 2018-19	9444.25	18.57
2	Closing GFA for FY 2018-19	9778.75	17.51
3	R&M Expenses	33.10	0.43
4	k-factor	0.34%	2.40%

After considering the k-factor determined above and projected capitalisation during Control period, R&M Expenses for Control period are submitted as under:

Table 43: R&M Expenses from FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
	Transmission Business			
1	Opening GFA	10246.93	10558.66	10747.42
2	Addition of GFA	311.74	188.76	1356.31
3	Closing GFA	10558.66	10747.42	12103.73
4	k-factor	1.76%	1.76%	1.76%
5	Inflation Factor	0.34%	0.34%	0.34%
6	**R&M Expenses**	**36.45**	**37.33**	**40.04**
	SLDC			
7	Opening GFA	17.51	25.61	27.43
8	Addition of GFA	8.10	1.82	51.03
9	Closing GFA	25.61	27.43	78.46
10	k-factor	1.76%	1.76%	1.76%
11	Inflation Factor	2.40%	2.40%	2.40%
12	**R&M Expenses**	**0.53**	**0.65**	**1.30**

4.13 Interest on Working Capital

Regulation 51 of the PSERC MYT Regulations, 2019 specifies as under:

"51.1. Components of Working Capital

The Working Capital shall cover the following:

(a) O&M Expenses for 1 month;

(b) Maintenance spares @ 15% of the O&M expenses;

(c) Receivables equivalent to two (2) months of fixed cost calculated on normative target availability.

51.2. Rate of Interest

The rate of interest on working capital shall be as per Regulation 25.1."

PSTCL has computed Interest on Working Capital (IoWC) as per above said Regulation. Rate of interest has been considered as 10.76% based on actual interest on working capital for H1 of FY 2019-20. IoWC for Control period is submitted as under:

Table 44: Interest on Working Capital for FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
	Transmission Business			
1	Receivables for two months	246.61	253.96	270.85
2	Maintenance spares @15% of O&M	90.44	93.39	96.80
3	O&M Expenses for one month	50.24	51.88	53.78
4	Total Working Capital	**387.29**	**399.23**	**421.42**
5	Rate of Interest (%)	10.76%	10.76%	10.76%
6	Interest on Working Capital	**41.67**	**42.95**	**45.34**
	SLDC			
7	Receivables for two months	3.44	3.76	4.22
8	Maintenance spares @15% of O&M	1.33	1.41	1.56
9	O&M Expenses for one month	0.74	0.78	0.87
10	Total Working Capital	**5.50**	**5.95**	**6.65**
11	Rate of Interest (%)	10.76%	10.76%	10.76%
12	Interest on Working Capital	**0.59**	**0.64**	**0.72**

4.14 ULDC Charges

PSTCL submits that actual ULDC Charges for FY 2018-19 as per audited accounts are Rs. 7.68 Crore, however the same are Rs. 10.73 Crore for FY 2017-18. It is noted that ULDC charges are fluctuating in each year. Hence, for the purpose of projection of ULDC Charges for Control period, PSTCL has considered the average of ULDC Charges actually incurred in past period from FY 2014-15 to FY 2018-19 as under:

Table 45: ULDC Charges for past period (Rs. Crore)

Sr. No.	Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Average (FY 2014-15 to FY 2018-19)
1	ULDC Charges	8.25	11.76	9.92	10.74	7.68	9.67

Accordingly, PSTCL submits the ULDC Charges of Rs. 9.67 Crore for each year of the Control period.

4.15 Non-Tariff Income

For the purpose of projection for Control Period, PSTCL has considered Non-tariff Income as submitted in True-up for FY 2018-19. Accordingly, PSTCL submits Non-tariff Income of Rs. 17.75 Crore for Transmission Business and Rs. 0.76 Crore for SLDC.

4.16 Summary of ARR

The summary of ARR for Transmission and SLDC Business for Control Period is shown in Table below:

Table 46: ARR for PSTCL for Control Period from FY 2020-21 to FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	Transmission Business			SLDC			Transmission Business and SLDC		
		FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23
1	Net Employee costs	538.51	556.05	574.75	7.32	7.66	8.01	545.83	563.71	582.76
2	Net R&M Expenses	36.45	37.33	40.04	0.53	0.65	1.30	36.98	37.98	41.33
3	Net A&G expenses	27.97	29.23	30.55	1.01	1.06	1.11	28.99	30.29	31.66
4	Depreciation	308.28	318.59	350.43	0.56	0.73	1.61	308.84	319.32	352.04
5	Interest charges	363.01	335.50	340.62	1.69	2.94	3.65	364.70	338.44	344.28
6	Interest on Working Capital	41.67	42.95	45.34	0.59	0.64	0.72	42.26	43.59	46.06
7	ULDC Charges	-	-	-	9.67	9.67	9.67	9.67	9.67	9.67
8	Return on Equity	154.50	188.85	222.27	-	-	-	154.50	188.85	222.27
9	Income tax	26.99	32.99	38.83	-	-	-	26.99	32.99	38.83
10	*Less*: Non-Tariff Income	17.75	17.75	17.75	0.76	0.76	0.76	18.52	18.52	18.52
11	**Aggregate Revenue Requirement**	**1,479.63**	**1,523.74**	**1,625.07**	**20.62**	**22.58**	**25.31**	**1,500.25**	**1,546.32**	**1,650.38**

5 Proposed Tariff for FY 2020-21

5.1 Cumulative Revenue Gap and its recovery

For the purpose of the present Petition, the Petitioner has computed the cumulative Revenue Gap for FY 2018-19 and FY 2019-20 arising out of True-up and Annual Performance Review respectively as under:

Hon'ble Commission in Tariff Order for FY 2018-19 has approved Net ARR of Rs. 1,281.99 Crore. Further, in APR, the net ARR approved for FY 2018-19 as Rs. 1,302.86 Crore. The revenue gap of Rs. 20.87 Crore was already considered by Hon'ble Commission in Tariff Order for FY 2019-20. Hence, the carrying cost in such gap is not considered.

Hence, the Petitioner has computed the cumulative revenue gap for FY 2018-19 as shown in the following Table:

Table 47: Carrying cost on Revenue Gap of True-up for 2018-19 (Rs. Crore)

Sr. No	Particulars	Rate of Interest (%)	FY 2018-19
1	Net ARR after True-up		1,350.37
2	Less: Net ARR Approved in Tariff Order		1,281.99
3	**Revenue Gap/(Surplus)**		**68.38**
4	Less: Revenue Gap/(surplus) considered in APR		20.87
5	**Net Revenue Gap/(Surplus) after True-up**		**47.51**
6	Carrying Cost for FY 2018-19 (half year)	10.40%	2.47
7	Carrying Cost for FY 2019-20 (full year)	10.76%	5.11
8	Carrying Cost for FY 2020-21 (half year)	10.76%	2.56
9	**Total Carrying Cost**		**10.14**
10	**Net Revenue Gap/(Surplus) after True-up incl. carrying cost**		**57.65**

Similarly, the cumulative Revenue gap arising out of APR for FY 2019-20 is shown in the following Table:

Table 48: Carrying cost on Revenue Gap of APR for FY 2019-20 (Rs. Crore)

Sr. No	Particulars	Rate of Interest (%)	FY 2018-19
1	Net ARR after Annual Performance Review		1,382.78
2	Less: Net ARR approved in Tariff Order		1,329.60
3	**Revenue Gap/(Surplus)**		**53.18**
4	Carrying cost for FY 2019-20 (half year)	10.76%	2.86
5	Carrying cost for FY 2020-21 (half year)	10.76%	2.86
6	**Total Carrying cost for recovery**		**5.72**
7	**Net Revenue Gap/(Surplus) after APR incl. carrying cost**		**58.91**

5.2 Proposed Tariff for FY 2020-21

PSTCL submits that at present there is only one distribution licensee (PSPCL) in the State. Hence, the total Annual Fixed Charges for Transmission and SLDC shall be borne by PSPCL for FY 2020-21.

Accordingly, PSTCL has proposed the Transmission Charges for the Transmission Business as shown in the following Table:

Table 49: Proposed Transmission Charges for FY 2020-21

Sr. No.	Particulars	FY 2020-21
1	Net ARR for FY 2020-21	1,479.63
2	Revenue Gap for FY 2018-19 along with carrying cost	57.65
3	Revenue Gap for FY 2019-20 along with carrying cost	58.91
4	**Annual Fixed Charges for Transmission Business**	**1,596.19**
5	Transmission System Capacity (Net) (MW)	13,443.16
6	Transmission Charges per month (Rs. Crore per month)	133.02
7	Transmission Charges (Rs. /MW/month)	98,942.11
8	Energy at Transmission Boundary for sale in State (MU)	59,583.81
9	Transmission Charges (paise/kWh)	26.79

Accordingly, PSTCL has proposed the SLDC Charges for FY 2019-20 as shown in the following Table:

Table 50: Proposed SLDC Charges for FY 2020-21

Sr. No.	Particulars	FY 2020-21
1	SLDC Charges (Rs. Crore)	20.62
2	SLDC Charges per month (Rs. Crore) for PSPCL	1.72
3	SLDC Charges (Rs. /MW/month) for Long Term/Medium term Open Access Customers	1277.98

PSTCL humbly prays to the Hon'ble Commission to approve the Transmission Charges and SLDC Charges along with past revenue gaps as submitted above.

6 Prayers

The Petitioner respectfully prays to the Hon'ble Commission:

a) To admit the Petition seeking approval of True-up for FY 2018-19 and Annual Performance Review for FY 2019-20 in accordance with PSERC MYT Regulations, 2014, as amended from time to time and; approval of Aggregate Revenue Requirement for 2nd Control Period from FY 2020-2021 to FY 2022-23 and Tariff for FY 2020-21 for Transmission Business and SLDC in accordance with PSERC MYT Regulations, 2019;

b) To approve Revenue Gap arising on account of True-up of FY 2018-19 and Annual Performance Review for FY 2019-20 along with their carrying cost and their recovery through Tariff in FY 2020-21, as worked out in this Petition;

c) To approve the revised capital expenditure for FY 2018-19 and FY 2019-20 submitted in the Petition;

d) To approve the ARR forecast and Tariff for 2nd Control Period FY 2020-21 to 2022-23 for Transmission Business and SLDC;

e) To approve proposed Tariff for FY 2020-21 for Transmission Business and SLDC;

f) To invoke its power under Regulation 64 in order to allow the deviations from PSERC MYT Regulations, 2019, wherever sought in this Petition;

g) To allow additions/alterations/modifications/changes to the Petition at a future date;

h) To allow any other relief, order or direction, which the Hon'ble Commission deems fit to be issued;

i) To condone any error/ omission and to give opportunity to rectify the same;

BY THE APPLICANT THROUGH

Chief Accounts Officer/Finance and Audit,
Punjab State Transmission Corporation Limited, Patiala.

7 Directives

Sr. No.	Issues	PSERC Comments & Directive	PSTCL's Reply
4.1	Boundary metering, Energy Audit and Reduction in Transmission Losses	The reply of PSTCL is incomplete. PSTCL has neither supplied the roadmap to reduce transmission losses below 2.5% nor the analysis of voltage wise transmission losses with proper installation of ABT meters on all boundary points of different voltage levels. The Commission further observes that there is a huge variation in losses during same months of the FY 2017-18 and FY 2018-19 and also over the full year month wise even during the months which have comparable energy inputs. This indicates that there is still no stabilization of data. The Commission also noticed from the letters of PSTCL that Transmission Losses are being computed based on manual readings of energy meters installed at boundary interface points. The possibility of inadvertent error in assessment of transmission losses read manually cannot be ruled out. For determination of the trajectory of transmission losses, the stabilised data of one complete year is required as this will become the basis of projections for the succeeding years. The Commission reiterates its directive to PSTCL to analyse voltage	The PSTCL Transmission Losses for FY 2018-19 are 2.86%, while the average NRLDC Transmission Losses for Northern Region for the FY 2018-19 are 3.59%. The PSTCL Transmission losses have reduced considerably from 3.11% (2017-18) to 2.86% (2018-19). Regarding Road Map to reduce Transmission losses below 2.5%, a detailed submission has already been submitted to the Hon'ble commission (Para 5.2.2 of the Business Plan - Copy attached as Annexure-A to Directives). The voltage wise Transmission losses shall be available after the implementation of SAMAST scheme, which is under process

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		wise transmission losses and give a roadmap to reduce to losses below 2.5% within one month of issue of Tariff Order. The Commission directs PSTCL to take utmost care to collect and compile the data from all the energy meters to remove any probable errors so that correct and reliable data is available for calculation of transmission losses.	and it is expected to be implemented within one year from the date of PSDF funding for which details have already been submitted to NRLDC, Power System Operation Corporation Limited. To remove the probable errors and for correct and reliable data, PSTCL is calculating the Transmission Losses on the basis of downloaded data of ABT/CEM meters through CMRI and is processing the losses through the software.
4.2	b) Unmanned Sub-stations:	PSTCL has not provided any timelines for implementation of remote control of the substations from Remote Control Centre (RCC). The Commission directs PSTCL to complete the implementation of Remote Control of all the five Sub-stations from Remote Control Centre and share the progress within two months of the issue of this Tariff Order.	Work Order for Substation Automation System, including video monitoring system, for 5 no. of 220KV Substations(220KV Substation Mohali, 220KV Substation Mohali-2,220KV Substation Kharar, 220KV Substation Dera Bassi and 220KV Substation Lalru) was awarded to M/s Siemens.

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			M/s Siemens has completed Substation Automation system on all the Substations, and only implementation of remote control of the substations from Remote Control Centre(RCC) is pending, for which matter is being persued vigorously with the company to finish the project at the earliest.
4.3	Loading Status of PSTCL Transmission lines and Substations:	The Commission notes that both 220KV Ckt 1& 2 from 220KV Gobindgarh-1 to Rajpura and 220KV line from RTP to Ghulal remained overloaded even at ambient temp of 15° C to 17°C. The generation at GGSSTP depends upon merit order dispatch and cannot be regulated according to loading conditions of the lines. PSTCL is directed to take remedial measures to deload the above mentioned circuits under intimation to the Commission.	220KV Gobindgarh-1 to Rajpura (Ckt. 1 & 2) To deload the above mentioned circuit, PSTCL has already taken the following remedial measures:- i) Replacement of existing conductor with HTLS conductor has been planned. ii) PSDF funding is admissible for replacement of Conductor with HTLS conductor. The concerned office is being approached for the approval of PSDF

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			funding. As soon as the approval is received the work shall be started. iii) Besides above, additional 220kv link (DC on DC tower) between 400kv Rajpura-220kv Bassi Pathana has been planned in Capital Investment Plan for FY 2020-23. 220 kV RTP Ghulal line: This overloading was a temporary incident. No overloading observed in subsequent quarters. No remedial action required as yet.
4.4	Maintenance of category wise details of fixed assets:	The Commission notes the compliance. PSTCL is directed to supply the voltage wise updated information on line, every year.	To comply with the Hon'ble Commission directive, formats have already been issued, to prepare the fixed asset register voltage wise. Information regarding Assets added during FY 2019-20 will be submitted

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			online on finalization of Annual Accounts.
4.5	Reactive Compensation.	PSTCL is directed to share the new reactive compensation study being conducted by CPRI for PSPCL/PSTCL at 220/132 kV level as well as 11/33/66 kV level for the year 2019-20 as per the decision taken in 37th Technical Coordination Committee (TCC) meeting/40th NRPC meeting. PSTCL may also keep the Commission informed regarding PSDF funding and approval of the project.	The Data related to PSTCL for new Reactive Compensation Study has already been submitted to NRLDC for further submission at CPRI. With respect to the latest position, a meeting was held on 01.11.2019 with representatives of CPRI at NRPC Secretariat to carry out the modalities for further studies. The report of CPRI shall be shared with PSERC on its receipt. Further, regarding reactive Compensation at 400/220KV level, Tender enquiries of reactors were floated and only 2 No. tenders were received for 400KV reactors and no tender received for 220KV reactors. Agenda for relaxing the qualifying criteria is under consideration of BOD's. GoI, MoP has approved 90% of funding of

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			the total Project Cost of providing said Reactors under PSDF Scheme. ,
4.8	Preventive maintenance of transmission lines.	During public hearings, number of complaints regarding failure of supply were received by the Commission from the large industrial consumers fed from 132/220 kV lines. In a surplus power scenario, failure to provide uninterrupted power supply to large industrial units not only results in loss of industrial production but loss of revenue to the distribution licensee also. PSTCL is directed to start a special drive for upkeep of all transmission lines and particularly those lines supplying power to industrial units in the State. PSTCL is further directed to supply quarterly information regarding detail of trippings/breakdowns on each 132/220/400 kV line along with duration of interruption and reason for the same.	Special drive for maintenance of 132/200/400KV lines has been carried out and detail of Preventive Maintenance done of 132/220KV Transmission lines from 01.04.2019 to date is attached as Annexure-B to Directives. Details of the Tripping/Breakdown on each 132/220/400 KV lines, where supply has been affected in the quarter 7/2019 to 9/2019 is attached as Annexure-C to Directives.
4.9	Strengthening of State Load Despatch Centre(SLDC)	The State Load Despatch Centers (SLDCs) have been established under Section 31 of the Electricity Act, 2003 to perform functions as directed in Section 32 of the Act. The SLDC has a pivotal role to ensure integrated, secure, reliable and efficient operation of the Power System in the State. With the large scale of integration	SLDC Wing of PSTCL is achieving the goals effectively and has already covered the following activities required under Ring fencing of the SLDC.

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		of RE power, automization and real time operation of the grid system in the near future, SLDC is required to be manned by well trained staff with long term commitment and motivation to work in this field. PSTCL is directed to ensure achievement of the above referred goals by effectively ring fencing the SLDC and ensuring adequate well trained manpower. Regular training with inbuilt system of incentives/rewards to the personnel manning SLDC should be ensured. PSTCL shall submit a complete plan to ensure compliance of the directive within four months from the date of issue of this Tariff Order.	i) PSLDC has met the peak demand of 13633 MW (highest ever till date) during the current year against 12638 MW demand during the past year 2018. ii) PSLDC is headed by an officer of CE rank and is reporting directly to CMD/PSTCL. iii) Separate ARR Petition is also being filed with Hon'ble commission for SLDC operations. iv) PSLDC has separate Accounting Unit with separate location code. v) Most of existing staff is experienced to handle various activities and their expertise is used for training of new comers.

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			vi) PSLDC officials are being deputed for training/refreshers course regularly. Since 2018, 20 No. officers participated in various program like Renewable energy sources and grid integration, Power System Operations, Program on Regulatory frame work in Power Sector, EMS training, Workshop on meteorology at different Institutions i.e. NRLDC, PSLDC & NPTI etc.