PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
SCO No. 220-221, SECTOR 34 A, CHANDIGARH

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PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
SCO NO. 220-221, SECTOR-34-A, CHANDIGARH

PETITIONS FILED BY PSTCL FOR
ANNUAL REVENUE REQUIREMENT AND
DETERMINATION OF TARIFF FOR MYT CONTROL PERIOD
FROM FY 2017-18 TO FY 2019-20

PRESENT: Ms. Kusumjit Sidhu, Chairperson
Sh. S.S. Sarna, Member
Ms. Anjuli Chandra, Member

Date of Order: 23rd October, 2017

ORDER

The Punjab State Electricity Regulatory Commission (Commission), in exercise of powers vested in it under the Electricity Act, 2003 (Act), passes this order determining the Annual Revenue Requirement (ARR) for FY 2017-18, FY 2018-19 & FY 2019-20 and Tariff for FY 2017-18 for transmission of electricity by the Punjab State Transmission Corporation Limited (PSTCL). The petitions filed by PSTCL, facts presented by PSTCL in its various submissions, objections received by the Commission, issues raised by the public in hearings held at Jalandhar, Bathinda and Chandigarh, the responses of PSTCL to the objections and observations of the Government of Punjab (GoP), in this respect have been considered. The State Advisory Committee constituted by the Commission under Section 87 of the Act has also been consulted and all other relevant facts and material on record have been perused before passing this Order.

1.1 Background

The Commission has in its previous Tariff Orders determined tariff in pursuance of the ARRs and Tariff Applications submitted for the integrated utility by the Punjab State Electricity Board (Board) for the years 2002-03 to 2006-07, 2008-09, 2009-10, 2010-11 and by PSTCL for 2011-12, 2012-13, 2013-14, 2014-15, 2015-16 and 2016-17. Tariff Order for FY 2007-08 had been passed by the Commission in suo-motu proceedings.

1.2 ARR & Multi Year Tariff Petition for the Control Period from FY 2017-18 to FY 2019-20

PSTCL has filed the ARR and MYT Petition for the Control Period (FY 2017-18 to FY 2019-20) on 30.11.2016. PSTCL has submitted that it is one of the 'Successor Companies' of the erstwhile Board, duly constituted under the Companies Act, 1956 on 16.04.2010, under the "Punjab Power Sector Reforms Transfer Scheme" (Transfer Scheme).

As per the Transfer Scheme, the erstwhile Punjab State Electricity Board (the predecessor) has been unbundled into two entities i.e. POWERCOM and TRANSCO. The POWERCOM has been re-named as Punjab State Power Corporation Limited (PSPCL) and the TRANSCO has been re-named as Punjab State Transmission Corporation Limited (PSTCL).

As per the Transfer Scheme, the Government of Punjab has segregated the "transmission business of erstwhile Punjab State Electricity Board" as under:

"The transmission undertaking shall comprise of all assets, liabilities and proceedings, belonging to the Punjab State Electricity Board, concerning the transmission of electricity and the State Load Dispatch Centre (SLDC) function".

On 24th December, 2012, Government of Punjab amended the Transfer Scheme vide notification number 1/4/04EB (PR)/620 known as Punjab Power Sector Reforms Transfer (First Amendment) Scheme, 2012.

Following are the salient features of the aforesaid amendments:

i) As per the transfer scheme, the funding of the Terminal Benefit Trusts in respect of pension, gratuity and leave encashment of the personnel, shall be a charge on the tariff of Powercom and Transco, respectively, on yearly basis, as may be decided by the Punjab State Electricity Regulatory Commission.

ii) The Terminal Benefit Trusts in respect of pension, gratuity and leave encashment, shall be progressively funded by the Powercom and Transco, as decided by the Punjab State Electricity Regulatory Commission, in the ratio of 88.64:11.36, over a period of 15 Financial Years commencing from 1st April, 2014. The terminal benefits liability accruing during the period of progressive funding, and thereafter, shall be shared in the same ratio by both corporations. Thus, funding shall continue even after the absorption of personnel in Transco and the trust shall be administered jointly by the said Powercom and Transco.

iii) It is also mentioned that the actual amount of pension, gratuity and leave encashment paid / to be paid on and with effect from 16th April, 2010 to 31st March, 2014, shall be shared by the Powercom and Transco, in the ratio of 88.64:11.36 on yearly basis.

iv) The General Provident Fund Trust, shall be funded by Powercom and Transco both, as per the apportionment made in the opening balance sheet, on and with effect from 16th April, 2010, and the same shall be funded over a period of ten years commencing on and with effect from 1st April, 2013, along with interest as applicable.

v) Also provided that for the period commencing from 16th April, 2010 to 31st March, 2013, the Powercom and Transco shall be liable to pay interest on the apportioned General Provident Fund liability, at the rate as applicable for the respective financial years.

vi) The Powercom and Transco, shall be liable to pay interest, as applicable to General Provident Fund from time to time, on the net accruals (on monthly basis) of the General Provident Fund amount on and with effect from 16th April, 2010, to the date of issuance of this notification, and thereafter all the General Provident Fund matters, shall be settled through Trust.

vii) Until otherwise directed by the State Government, the Powercom and Transco shall maintain common Trust for pension, gratuity and other terminal benefit liabilities and General Provident Fund, instead of individual Trusts for each of the companies and all the contributions shall be made to such Trusts in the aforesaid manner.

viii) The Government of Punjab notified the final opening balance sheet for PSPCL and PSTCL as on the 16th April, 2010.

Based on the opening balance sheet notified by the Government of Punjab vide the Amendment in Transfer Scheme, the provisions of Regulation 13 of the Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2005 and its subsequent amendments and Punjab State Electricity Regulatory Commission (Terms and Conditions of Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2014, the petitioner has filed petition for True-up for FY 2014-15, Review of ARR for FY 2016-17 and ARR for Control Period from FY 2017-18 to FY 2019-20.

The petitioner has prayed to the Commission to:

a) Admit the petition seeking approval of True-up for FY 2014-15, Review of ARR for FY 2016-17 and approval of ARR and Tariff for the Control Period from FY 2017-18 to FY 2019-20 in accordance with PSERC MYT Regulations, 2014;

b) Approve the actual Revenue Gap arising on account of True-up for FY 2014-15 along with carrying cost and its recovery through Tariff, as worked out in this petition;

c) Approve the Revenue Gap arising on account of re-determination of ARR on review of FY 2016-17 along with carrying cost and its recovery through Tariff, as worked out in this petition;

d) Approve the re-determination of ARR for FY 2016-17 after review, which is payable by PSPCL to PSTCL during FY 2016-17;

e) Approve the ARR forecast and Tariff for the Control Period from FY 2017-18 to FY 2019-20 for Transmission Business and SLDC;

f) Invoke its power under Regulations 66 and 67 in order to allow the deviations from PSERC MYT Regulations, 2014, wherever sought in this petition;

g) Allow additions/alterations/modifications/changes to the petition at a future date;

h) Allow any other relief, order or direction, which the Commission deems fit to be issued;

i) Condone any error/omission and to give opportunity to rectify the same.

On scrutiny of the petition, it was noticed that the petition was deficient in some respects. The deficiencies were conveyed to PSTCL vide letter no.PSERC/Tariff/T-196/6430 dated 14.12.2016. The replies to deficiencies were furnished by PSTCL vide its Memo. No. 3511/FA/MYT-1B dated 21.12.2016. Accordingly, after taking into consideration the reply of PSTCL dated 21.12.2016, the petition was taken on record on 29.12.2016 as Petition No. 89 of 2016.

PSTCL filed a Petition (No. 44 of 2016) on 30.05.2016 for approval of Capital Investment Plan for MYT Control Period from FY 2017-18 to FY 2019-20, which was admitted on 09.06.2016. The petition was deficient on various points. The Commission vide order dated 16.08.2016 directed PSTCL to resubmit the Capital Investment Plan to the Commission by 26.08.2016, after attending to the deficiencies / observations pointed out in the order. PSTCL vide Memo. No. 2446/FA/Comml.-703 dated 23.08.2016 sought extension for re-submission of Capital Investment Plan by 30.09.2016. PSTCL vide Memo. No.2693/FA/Comml.-703 dated 26.09.2016 submitted the replies / revised submissions on the observations / deficiencies pertaining to Capital Investment Plan. Further, PSTCL vide Memo. No. 15 dated 02.01.2017, Memo. No.303 dated 23.01.2017, Memo. No. 1354 dated 08.05.2017 and Memo. No. 1725 dated 05.06.2017 submitted additional submissions and vide Memo. No. 1857/FA/ Comml.-703/Vol.-II dated 22.06.2017 submitted Revised MYT Transmission Work List including the additional submissions.

PSTCL also filed another Petition (No. 45 of 2016) on 30.05.2016 for approval of Business Plan for MYT Control Period from FY 2017-18 to FY 2019-20, which was also admitted on 09.06.2016. The Petition was deficient on various points. The Commission vide order dated 16.08.2016 directed PSTCL to resubmit the Business Plan to the Commission by 26.08.2016, after attending to the deficiencies / observations pointed out in the order. PSTCL vide Memo. No. 2445/FA/Comml.-703 dated 23.08.2016 sought extension for re-submission of Business Plan by 30.09.2016. PSTCL vide Memo. No. 2692/FA/Comml.-703 dated 26.09.2016 submitted replies / revised submissions on the observations / deficiencies pertaining to the Business Plan.

1.3 Objections and Public Hearings

A public notice in respect of petitions for Capital Investment Plan & Business Plan and Petition for ARR and determination of tariff for MYT Control Period from FY 2017-18 to FY 2019-20 was published by PSTCL in The Tribune (English), Hindustan Times (English), Punjabi Jagran (Punjabi) and Punjabi Tribune (Punjabi) on 30.12.2016 and Dainik Jagran (Hindi) on 31.12.2016, inviting objections from the general public and stake holders on the petitions filed by PSTCL. Copies of the ARR, Capital Investment Plan and Business Plan were made available on the website of PSTCL and in the offices of the Financial Advisor, PSTCL, 3rd Floor, Shakti Sadan, Opposite Kali Mata Mandir, The Mall, Patiala, Liaison Officer, PSTCL Guest House, near Yadvindra Public School, Phase-8, Mohali and also in the offices of the Chief Engineer/P&M, PSTCL, Ludhiana and Superintending Engineers, P&M Circles, Ludhiana, Patiala, Jalandhar, Amritsar and Bhatinda. In the public notice, objectors were advised to file their objections with the Secretary of the Commission within 30 days of the publication of the notice i.e. by 30.01.2017, with an advance copy to PSTCL. The public notice also indicated that the Commission, after perusing the objections received, may invite such objector(s) as it considers appropriate for hearing on the dates to be notified in due course.

The Commission decided to hold public hearings at Jalandhar, Bhatinda, Chandigarh and Ludhiana. A public notice to this effect was published in various news papers i.e. The Tribune, Punjab Kesri and Jagbani on 28.01.2017 and Punjabi Tribune and Hindustan Times on 29.01.2017, as well as uploaded on the website of the Commission. The objectors and consumers whose objections were received by the due date were also informed in this respect, as per details hereunder:

Venue	Date & time of public hearing	Category of consumers to be heard
JALANDHAR Conference Room, Office of Chief Engineer/Operation (North), PSPCL, Shakti Sadan, GT Road, Near Khalsa College, Jalandhar.	**February 06, 2017** 11.30 AM to 1.30 PM (To be continued in the afternoon, if necessary).	All consumers/ organizations of the area.
BATHINDA Conference Room, Guest House, Thermal Colony, PSPCL, Bathinda.	**February 07, 2017** 11.30 AM to 1.30 PM (To be continued in the afternoon, if necessary).	All consumers/ organizations of the area.
CHANDIGARH Commission office i.e. SCO 220-221, Sector 34-A, Chandigarh.	**February 08, 2017** 10.30 AM to 12.30 PM	All consumers except Industrial & Agricultural consumers/organizations and Officers'/Staff Associations of PSPCL and PSTCL.
	12.30 P.M. to 2:30 PM	Agricultural consumers and their unions.
CHANDIGARH Commission office i.e. SCO 220-221, Sector 34-A, Chandigarh.	**February 09, 2017** 11.00 AM to 1.30 PM	Industrial consumers / organizations
	3.00 PM onwards	Officers' / Staff Associations of PSPCL and PSTCL
LUDHIANA Multi Purpose Hall, Power Colony, PSPCL, Opposite PAU, Ferozepur Road, Ludhiana.	**February 13, 2017** 11.30 AM to 1.30 PM (To be continued in the afternoon, if necessary).	All consumers/ organizations of the area.

Through this public notice, it was also intimated that the Commission will also hear the comments of the Punjab State Power Corporation Limited and Punjab State Transmission Corporation Limited to the objections raised by the public besides Corporations' own point of view at Commission's office i.e. SCO 220-221, Sector 34-A, Chandigarh on 10.03.2017 from 11.00 AM to 1.00 PM (to be continued in the afternoon, if necessary).

1.4 The Commission held public hearings as per schedule from 6th February, 2017 to 9th February, 2017 at Jalandhar, Bathinda and Chandigarh. The public hearing scheduled to be held at Ludhiana on 13th February, 2017 was postponed by the Commission due to unavoidable circumstances. The said hearing was held at

Chandigarh on 08.03.2017 after a public notice in this regard was published in The Tribune, Punjabi Tribune, Hindustan Times, Punjab Kesri and Jagbani newspapers on 04.03.2017. The views of PSTCL on the objections/comments received from public and other stakeholders were heard by the Commission on 10.03.2017.

1.5 Petition for True-Up of FY 2015-16

PSTCL filed Petition (No.34 of 2017) for True-Up of FY 2015-16 in respect of its transmission and SLDC functions on 15.05.2017, which was admitted and taken on record on 19.05.2017. Public notice was published on 23.05.2017 in The Tribune (English), Hindustan Times (English), Punjabi Jagran (Punjabi), Ajit (Punjabi), Dainik Bhaskar (Hindi) inviting objections, if any, together with supporting material within fifteen days of the publication of notice.

1.6 The Commission decided to hold another public hearing in connection with petition for ARR and determination of Tariff (Petition No. 89 of 2016), Petition for approval of Capital Investment Plan (Petition No. 44 of 2016), Business Plan (Petition No. 45 of 2016) and Petition No. 34 of 2017 for True-up of FY 2015-16. Public notice in this regard was published on 15.08.2017 in The Tribune (English), Punjabi Tribune (Punjabi), Hindustan Times (English), Punjab Kesri (Hindi) and Jagbani newspapers for public hearings to be held as per detail below:

Venue	Date & time of public hearing	Category of consumers to be heard
CHANDIGARH Commission office i.e. SCO 220-221, Sector 34-A, Chandigarh.	**September 05, 2017** 11.00 AM to 1.30 PM	Industrial consumers/ organizations.
	3.00 PM onwards	Agricultural consumers and their unions.
CHANDIGARH Commission office i.e. SCO 220-221, Sector 34-A, Chandigarh.	**September 06, 2017** 11.00 AM to 1.30 PM	All consumers except Industrial & Agricultural consumers/organizations and Officers'/Staff Associations of PSPCL and PSTCL.
	3.00 PM onwards	Officers'/Staff Associations of PSPCL and PSTCL.

The comments of PSTCL to the objections raised by the public besides Corporation's own point of view regarding the petitions were heard on 08.09.2017.

1.7 The Government of Punjab, Department of Power was approached by the Commission through DO letter No. DIR/T-196/6618-19 dated 04.01.2017 seeking its views on the petitions for (i) Capital Investment Plan of PSTCL (Petition No. 44 of 2016), (ii) Business Plan of PSTCL (Petition No. 45 of 2016) and (iii) Annual

Revenue Requirement for MYT Control Period from FY 2017-18 to FY 2019-20 (Petition No.89 of 2016), including the True-up for FY 2014-15 and Review of FY 2016-17. Further, the views of the Government on Petition No. 34 of 2017 for True-up of FY 2015-16 were sought vide DO letter No. T-212/396 dated 30.05.2017. In response, Government of Punjab, Department of Power, through its Principal Secretary, vide Memo. No.1/3/2017-EB(PR)/585 dated 14.09.2017, submitted its comments / observations on the ARR and MYT Petition for the control period from FY 2017-18 to FY 2019-20.

1.8 The Commission received 4 written objections including the comments of Government of Punjab. All objections were received after the due date. The Commission decided to take these objections into consideration.

The Number of objections (category-wise) received from consumer groups, organizations and others are detailed below:

Sr. No.	Category	No. of Objections
1	Industry	2
2	PSEB Engineers' Association	1
3	Government of Punjab	1
	Total	**4**

The complete list of objectors is given in **Annexure-I** to this Tariff Order. PSTCL submitted its comments on the objections, which were made available to the respective objectors. A summary of issues raised in objections, the response of PSTCL and the view of the Commission are contained in **Annexure-II** to this Tariff Order.

1.9 State Advisory Committee

The State Advisory Committee constituted under Section 87 of the Act, discussed the petitions of PSTCL, in a meeting convened for the purpose on 14.02.2017. The minutes of the meeting of the State Advisory Committee are enclosed as **Annexure-III** to this Order.

The Commission has, thus, taken the necessary steps to ensure that due process, as contemplated under the Act and Regulations framed by the Commission, is followed and adequate opportunity is given to all stakeholders in presenting their views.

1.10 Compliance of Directives

In its previous Tariff Orders, the Commission had issued certain directives to PSTCL in the public interest. A summary of directives issued during previous years, status of compliance along with the directives of the Commission in the petitions is given in **Chapter 6** of this Tariff Order.

1.11 In this Order, the Commission has dealt with Petition No. 89 of 2016 for ARR and determination of Tariff for MYT Control Period from FY 2017-18 to FY 2019-20 and Petition No. 34 of 2017 for True-up of FY 2015-16 filed by PSTCL. However, the Commission provisionally approves the Capital Investment Plan (Petition No. 44 of 2016) and Business Plan (Petition No. 45 of 2016) and final Order in this regard shall be issued separately.

Chapter 2
True up for FY 2014-15

2.1 Background

The Commission had approved the ARR and Tariff for FY 2014-15 in its Tariff Order dated 22.08.2014, which was based on costs and revenue estimated by the Punjab State Tranmission Corporation Limited (PSTCL) for its Transmission and SLDC functions.

PSTCL in its ARR for FY 2015-16 had submitted the revised estimates of costs and revenue for FY 2014-15. The Commission considered it appropriate and fair to revisit and review the approvals granted by it for FY 2014-15 with reference to the revised estimates made available by PSTCL and accordingly approved the revised ARR for FY 2014-15 in the Review.

PSTCL in its ARR for FY 2016-17 had submitted that the audit of annual accounts for FY 2014-15was not completed and will be submitted as soon as the audited account for FY 2014-15 are available. PSTCL had further prayed that the truingup exercise for FY 2014-15 may be undertaken by the Commission after the finalization of Audited Annual Accounts.The Commission accordingly decided, in the Tariff Orderfor FY 2016-17, to undertake the true up for FY 2014-15 alongwith ARR petition for FY 2017-18.

PSTCL in the ARR for MYT Control Period fromFY 2017-18 to FY 2019-20, hasfurnished the Annual Audited Accounts for FY 2014-15, which again vary in parts with the figures taken into account by the Commission in the review of FY 2014-15. This Chapter contains the final true up for FY 2014-15, based on the Audited Annual Accounts for FY 2014-15submitted by the utility.

2.2 Transmission System Availability

2.2.1 PSTCL, in the ARR for MYT Control Period for FY 2017-18 to FY 2019-20, has submitted its month-wise average Transmission System Availability for FY 2014-15 as shown in Table 2.1(a).

Table 2.1(a): Transmission System Availability of PSTCL for FY 2014-15

Sr. No.	Month	Availability (%)
1.	April, 2014	99.85
2.	May, 2014	99.84
3.	June, 2014	99.78
4.	July, 2014	99.09
5.	August, 2014	99.80
6.	September, 2014	99.86
7.	October, 2014	99.95
8.	November, 2014	99.85
9.	December, 2014	99.83
10.	January, 2015	99.91
11.	Feburary, 2015	99.85
12.	March, 2015	99.79
	Average Availability	**99.78**

2.2.2 **Incentive on Transmission System Availability**

PSTCL has submitted, in the ARR for MYT Control Period for FY 2017-18 to FY 2019-20, that as per PSERC Tariff Regulations, it is eligible for incentive for over achieving the availability targets for transmission system availability, which has been verified and certified by SLDC.

PSTCL has submitted the net transmission charges inclusive of incentive on the basis of fixed charges for STU, as given in Table 2.1(b).

Table 2.1(b): Incentive on Transmission System Availability for FY 2014-15 submitted by PSTCL

(₹crore)

Sr. No.	Month	Monthly Transmission Charges	Transmission Charges including Incentive	Incentive
1.	April, 2014	89.78	91.48	1.70
2.	May, 2014	92.78	94.52	1.74
3.	June, 2014	89.78	91.42	1.64
4.	July, 2014	92.78	93.81	1.03
5.	August, 2014	92.78	94.48	1.70
6.	September, 2014	89.78	91.49	1.71
7.	October, 2014	92.78	94.62	1.84
8.	November, 2014	89.78	91.48	1.70
9.	December, 2014	92.78	94.51	1.73
10.	January, 2015	92.78	94.59	1.81
11.	Feburary, 2015	83.80	85.38	1.58
12.	March, 2015	92.78	94.47	1.69
	Total	**1092.38**	**1112.25**	**19.87**

PSTCL has prayed to approve the incentive of ₹19.87 crore for transmission system availability, for FY 2014-15.

The Commission has determined the incentive for achieving transmission system availability more than the norms laid by the Commission, as per approved ARR of Transmission Business as ₹1056.30 crore in this Tariff Order (refer Table2.9) as shown in Table 2.1(c).

Table 2.1(c): Incentive on Transmission System Availability for FY 2014-15 determined by the Commission

Sr.No.	Month	Availability (%)	Monthly Transmission Charges (₹ crore)	Transmission Charges inclusive of Incentive (₹ crore)	Incentive (₹ crore)
I	II	III	IV	V	VI
1.	April, 2014	99.85	86.82	88.46	1.64
2.	May, 2014	99.84	89.71	91.40	1.69
3.	June, 2014	99.78	86.82	88.40	1.58
4.	July, 2014	99.09	89.71	90.71	1.00
5.	August, 2014	99.80	89.71	91.36	1.65
6.	September, 2014	99.86	86.82	88.47	1.65
7.	October, 2014	99.95	89.71	91.50	1.79
8.	November, 2014	99.85	86.82	88.46	1.64
9.	December, 2014	99.83	89.71	91.39	1.68
10.	January, 2015	99.91	89.71	91.46	1.75
11.	Feburary, 2015	99.85	81.02	82.56	1.53
12.	March, 2015	99.79	89.71	91.35	1.64
	Total		**1056.30**		**19.21**

The Commissionhas determined incentive of ₹19.21 crore for achieving transmission system availability more than the norms laid by the Commission during FY 2014-15, which the Commission approves.

2.3 Transmission Loss

The Commission had approved the Transmission Loss for PSTCL system provisionally at 2.5% for FY 2014-15, in the Tariff Order for FY 2014-15. It was also decided that the Commission will revisit theTransmission Loss of PSTCL while undertaking the review for FY 2014-15, after PSTCL installs meters at all the points connecting with PSPCL system.

PSTCL in the ARR for FY 2015-16, had submitted the details of steps taken by it for completion of work of intra-state boundary metering and had further submitted that the work will be completed by 31.05.2015. PSTCL had further submitted in the ARR for the year that various transmission utilities of other similar States have their transmission loss in the range of 3.38-4.55%. PSTCL had alsosubmitted that the overall transmission loss will be provided by 30.06.2015 along with the data for at least 6 months, as desired by the Commission for complete analysis of the losses. PSTCL prayed that as the transmission losses figures were not available, the Commission may consider approving the transmission losses of 3.94% as per preliminary report submitted by the firm carrying out the work of implementation of inter-state boundary metering.

PSTCL in its ARR and Tariff Petition for MYT Control Period for FY 2017-18 to FY 2019-20 has submitted that at present, the data has been collected for calculation of transmission losses of August, 2016 through remote connectivity, CMRI & manual reports. The tentative losses are 2.76%, which are being re-verified and further certain anomalies are being resolved which may take another few weeks. It was expected by PSTCLthat data from all the boundary meters shall be available through remote connectivity in the CEC after rectifying all the field related problems by November, 2016. PSTCL has further prayed to the Commission to approve the Transmission Losses as requested in the Tariff Petition for FY 2014-15 i.e. 4.5%.

The Commission notes that actual Transmission Loss of PSTCL Transmission System could not be determined. **As such, the Commission approves the Transmission Loss of 2.5% for FY 2014-15.**

2.4 Employee Cost

2.4.1 In the ARR Petition for FY 2014-15, PSTCL had projected employee expenses of ₹453.54 crore for its Transmission Business and ₹8.52 crorefor its SLDC business for FY 2014-15. The Commission had approved employee cost of ₹298.66 crore for Transmission Business and ₹6.80 crore for SLDC Business of PSTCL for FY 2014-15.

2.4.2 In the ARR Petition for FY 2015-16, PSTCL had submitted revised estimates of employee cost of ₹396.65 crore for Transmission Business and had claimed ₹3.81 crore for SLDC Business for FY 2014-15. The Commission approved the revisedemployee cost of ₹322.31 crore for Transmission Business and ₹3.73 crore for SLDC Business of PSTCL at the time of review of FY 2014-15.

2.4.3 In this ARR Petition, PSTCL has submitted employee expenses of ₹349.90 crore for Transmission Business (net of capitalization of ₹45.01 crore) and ₹5.72 crore for SLDC Business based on Audited Annual Accounts for FY 2014-15. The detail of Employee Cost claimed by PSTCL for 2014-15 is summarized in Table 2.2.

Table 2.2: Employee Cost claimed by PSTCL for FY 2014-15

(₹crore)

Sr. No.	Particulars	STU	SLDC	PSTCL
1.	Terminal Benefits	205.50	0.10	205.60
2.	Other Employee Cost	142.84	5.59	148.43
3.	Arrears of pay revision	1.56	0.03	1.59
Total Employee Cost		**349.90**	**5.72**	**355.62**

2.4.4 As per the provisions of Regulation 28 of PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, terminal benefits are allowed on actual basis.

2.4.5 An amount of ₹4.93 crore of 'other terminal benefits' relating to provision for Solatiums, Gratuity and Leave Encashment in respect of employees recruited by company depicted in the total amount of terminal benefits of ₹205.50 crore in the Audited Annual Accounts is not allowable as per Regulation 33 of PSERC Tariff Regulations, 2009, which states that with regard to unfunded past liabilities of pension and gratuity, the Commission follow the principle of 'pay as you go'. Moreover, the terminal benefits are required to be apportioned and allowed in the ratio of 88.64% and 11.36% between PSPCL and PSTCL respectively as per Transfer Scheme. PSTCL's share @11.36% of terminal benefits has been depicted as ₹200.67 crore in the Audited Annual Accounts for PSTCL.

Thus, the Commission allows terminal benefits of ₹200.57 (205.50-4.93) crore for Transmission Business and ₹0.10 crore for SLDC Businessin FY 2014-15.

2.4.6 As per PSERC Regulations, increase in 'other employee cost' is to be limited to average Wholesale Price Index (WPI) on the base employee cost approved for FY 2011-12. However, in view of Hon'ble APTEL judgment dated 30.03.2015, in Review Petition No.6 of 2015, wherein Hon'ble APTEL held that *"actual costs need to be considered"*, the Commission vide its Order dated 14.10.2015 decided as under:

"the Judgments of Hon'ble APTEL, in so far as Employee Cost for FY 2012-13, FY 2013-14, FY 2014-15 etc. of PSPCL and PSTCL is concerned, shall be implemented during true-up exercise of ARR for these year after applying prudence check".

As such, the Commission approves actual 'Other Employee Cost' as ₹142.84 crore for Transmission Business and ₹5.59 crore for SLDC Business based on Audited Annual Accounts for FY 2014-15.

2.4.7 PSTCL has also claimed ₹1.56 crore as arrear of pay revision for Transmission Business paid during the year 2014-15. The Commission allows ₹1.56 crore as arrear of pay for FY 2014-15 for Transmission Business.

PSTCL has also claimed ₹0.03 crore as arrear of pay revision for SLDC Business and same is allowed.

Therefore, the Commission allows total Employee Cost of ₹344.97 (200.57+142.84+1.56) crore for Transmission Business and ₹5.72 (0.10+5.59+0.03) crore for SLDC Business based on Audited Annual Accounts for FY 2014-15.

2.5 Repair and Maintenance (R&M) Expenses

2.5.1 In the ARR Petition for FY 2014-15, PSTCL projected R&M expenses of ₹61.33 crore for its Transmission Business and ₹5.15 crore for its SLDC Business for FY 2014-15 against which the Commission approved ₹46.45 crore and ₹4.04 crore as R&M expenses for Transmission Business and SLDC Business of PSTCL respectively.

2.5.2 In the ARR Petition for FY 2015-16, PSTCL revised its claim of R&M expenses to ₹101.19 crore for its Transmission Business and ₹7.82 crore for SLDC Business. The Commission approved the revised R&M expenses as ₹50.98 crore for Transmission Business and ₹4.19 crore for SLDC Business of PSTCL at the time of review of FY 2014-15.

2.5.3 In this Petition, PSTCL has claimed total R&M expenses of ₹37.15 crore (₹36.05 crore for Tarnsmission Business and ₹1.10 crore for its SLDC Business) based on the Audited Annual Acoounts for FY 2014-15.

2.5.4 The Commission had approved R&M expenses of ₹25.92 crore for Transmission business and ₹1.93 crore for SLDC business for FY 2011-12 in para 3.5.7 of Tariff Order FY 2014-15. As per Regulations 28 of PSERC Tariff Regulation 2005, O&M expenses approved by the Commission for the year 2011-12 (True-up) are to be considered as base O&M expenses for subsequent year.

2.5.5 Regulation 28 of the PSERC Tariff Regulations, 2005 amended on 17.09.2012 provides for adjusting base O&M expenses approved by the Commission in the True-up of FY 2011-12 in proportion to increase in Whole Sale Price Index (all Commodities) to determine O&M expenses for subsequent year. The Commission in Tariff Order 2014-15 approved ₹25.92 crore for Transmission Business and ₹1.93 for SLDC Business for FY 2011-12 on Gross Fixed Assets of ₹5265.17 crore and ₹5.50 crore as on 01.04.2012 for Transmission Business and SLDC Business respectively.

The opening GFA as on 01.04.2014 is ₹6591.67 crore for Transmission Business and ₹5.78 crore for SLDC Business. Therefore, base R&M expenses for FY 2014-15 work out to ₹32.45 (25.92/5265.17*6591.67) crore for Transmission Business and ₹2.03 (1.93/5.50*5.78) crore for SLDC Business. The R&M expenses works out to ₹36.96 (₹32.45*113.90/100) crore for Transmission Business and ₹2.31 (₹2.03*113.90/100) crore for SLDC Business for FY 2014-15, by applying WPI increase @13.90% on the base R&M expenses.

2.5.6 PSTCL has addition ofassets worth ₹1465.04 crore (₹1462.50 crore for Transmission Business and ₹2.54 crore for SLDC Business) during FY 2014-15. In the absence of actual dates of commissioning of the addition in assets, these assets have been considered for 6 months on an average. The opening value of GFA as on 01.04.2014 was ₹6591.67 crore for STU and ₹5.78 crore for SLDC and closing balance as on 31.03.2015 ₹8054.17 crore of transmission business, ₹8.32 for SLDC Business. The average percentage rate of R&M expenses of ₹36.96 crore for assets of ₹6591.67 crore works out to 0.56% (36.96/6591.67). By applying the average rate of 0.56% on addition of assets of ₹1462.50 crore for half year, the allowable R&M expenses for FY 2014-15 work out to ₹4.10 [(1462.50/2)x0.56%] crore. Thus, the total R&M expenses for Transmission business works out to be ₹41.06 (36.96+4.10) crore. However, PSTCL has claimed as claimed ₹36.05 crore as R&M expenses for Transmission business based on Audited Annual Accounts.Therefore, the Commission accordingly allows ₹36.05 crore as R&M expenses for Transmission business.

2.5.7 There was an addition of assets of ₹2.54 crore for SLDC Business for FY 2014-15. In the absence of actual dates of commissioning of the addition in assets, these assets have been considered for 6 months on an average. The average percentage rate of R&M expenses of ₹2.31 crore for asset of ₹5.78 crore works out to 39.97% (2.31/5.78). By applying the average rate of 39.97% on addition of assets of ₹2.54 crore for half year, the allowable R&M expenses for FY 2014-15 works out to ₹0.51 [(2.54/2)x39.97%] crore. Thus, the total R&M expenses for SLDC Business work out to ₹2.82 (2.31+0.51) crore. However, the PSTCL has claimed ₹1.10 crore as R&M expenses for SLDC business based on the Audited Annual Accounts. Therefore, the Commission allows ₹1.10 crore as R&M expenses for SLDC business.

In view of above, the Commission approves ₹37.15 (₹36.05 crore for Transmission Business + ₹1.10 crore for SLDC Business) crore of R&M expenses for FY 2014-15.

2.6 Administration and General (A&G) Expenses

2.6.1 In the ARR Petition for FY 2014-15, PSTCL projected A&G expenses of ₹30.59 crore for its Transmission Business and ₹2.60 crore for its SLDC Business crore for FY 2014-15, against which the Commission approved ₹21.56 crore and ₹1.17 crore as A&G expenses for Transmission Businessand SLDC Businessof PSTCL respectively.

2.6.2 In the ARR Petition for FY 2015-16, PSTCL revised its claim of A&G expenses to ₹23.50 crore for Transmission Business and ₹2.28 crore for SLDC Business for FY 2014-15. The Commission approved the revised A&G expenses as ₹23.50 crore for Transmission Business and ₹1.21 crore for SLDC Business of PSTCL, at the time of Review of FY 2014-15.

2.6.3 In the ARR Petition, PSTCL has claimed total A&G expenses of ₹30.19 crore (₹29.37 crore for Transmission business and ₹0.82 crore for its SLDC business) based on the Audited Annual Accounts for FY 2014-15. PSTCL has also claimed ₹1.30 crore as property tax paid during FY 2014-15.

2.6.4 Regulation 28 ofthe PSERC Tariff Regulations, 2005 amended on 17.09.2012 provides for adjusting base O&M expenses approved by the Commission for FY 2011-12 in proportion to increase in Whole Sale Price Index (all Commodities) to determine O&M expenses for the subsequent year. The Commission in Tariff Order 2014-15 (para 3.6.8) approved ₹11.59 crore for Transmission Business and ₹0.56 crore for SLDC Business for FY 2011-12 on Gross Fixed Assets of ₹5265.17 crore and ₹5.50crore for Transmission Business and SLDC Business respectively as on 01.04.2012.

2.6.5 The opening GFA as on 01.04.2014 is ₹6591.67 crore for Transmission Business and ₹5.78 crore for SLDC Business. Therefore, base A&G expenses for FY 2014-15 work out to ₹14.51 (11.59/5265.17*6591.67) crore for Transmission Business and ₹0.59 (0.56/5.50*5.78) crore for SLDC Business. The A&G expenses works out to ₹16.53 (14.51*113.90/100) crore for Transmission Business and ₹0.67 (₹0.59*113.90/100) crore for SLDC Business for FY 2014-15 by applying WPI increase @13.90% on the base A&G expenses.

2.6.6 In accordance with Regulation 28 of the PSERC Tariff Regulations, the A&G expenses are allowable for additional assets added during the year on pro–rata basis from the date of commissioning of assets. Fixed assets approved to be added during the year are considered as having remained in service for six months on an average during the year as the actual dates of commissioning of assets added during the year have not been mentioned / made available.

2.6.7 PSTCL has submitted that the capitalization of fixed assets during FY 2014-15 was

₹1462.49 crore for Transmission Business and ₹2.54 crore for SLDC Business. The opening value of GFA as on 01.04.2014 was ₹6591.67 crore for Transmission Business and ₹5.78 crore for SLDC Businessand closing balance is ₹8054.17 crore and ₹8.32 crore for Transmission Business and SLDC Businessrespectively. There is addition to assets is ₹1462.50 crore and ₹2.54 crore in Transmission Business and SLDC Business respectively.The A&G expenses for these assets added during the year are being considered assuming that these assets remained in service for the STU and SLDC for six months on an average during FY 2014-15. The average percentage rate of A&G expenses of ₹16.53 crore for asset of ₹6591.67 crore works out to 0.25% (16.53/6591.67) for Transmission Business and average percentage rate of A&G expenses of ₹0.67 crore for assets of ₹5.78 crore works out to 11.60%(0.67/5.78).

By applying the average rate of 0.25% on addition of assets of ₹1462.49 crore for half year, the allowable A&G expenses for FY 2014-15 works out to ₹1.83 crore [0.25%*(1462.49/2)] for Transmission business. Similarly, applying average rate of 11.60% on asset addition of ₹2.54 crore for half year, the allowable A&G expenses for FY 2014-15 works out to ₹0.15 [11.60%*(2.54/2)] crore for SLDC business.

PSTCL has also claimed an amount of ₹0.26 crore as Audit Fee and ₹0.50 crore as Licence fee. As such, the total amount of PSTCL for Transmission Business works out to ₹19.12 (16.53+1.83+0.26+0.50) crore as against the claim of ₹29.37 crore. Property tax of ₹1.30 crore claimed by PSTCL have not been approved by the Commission as per the Regulations. The total A&G expenses for SLDC Business works out to ₹0.82 (0.67+0.15) crore as against the claim of ₹0.82 crore. **Thus, the Commission approves the A&G expenses of ₹19.12 crore for Transmission business and ₹0.82 crore for SLDC business for FY 2014-15.**

2.7 Depreciation Charges

2.7.1 In the ARR Petition of FY 2014-15, PSTCL had claimed depreciation charges of ₹239.44 crore for its Transmission Business and ₹1.86 crore for SLDC Business against which ₹186.00 crore for Transmission Business and ₹1.45 crore for SLDC Business was approved by the Commission in the Tariff Order for FY 2014-15.

2.7.2 In the ARR Petition for FY 2015-16, PSTCL had revised its claim of depreciation to ₹193.87 crore for Transmission Business and ₹0.74 crore for SLDC Business for FY 2014-15. In addition to this, PSTCL had also claimed ₹33.66 crore as advance against depreciation for Transmission Business for FY 2014-15. The Commission approved the revised depreciation charges as ₹186.00 crore for Transmission

Businessand ₹1.44 crore for SLDC Business at the time of review of FY 2014-15.

2.7.3 PSTCL has claimed ₹217.32 crore as depreciation charges for Transmission Business and ₹0.44 crore as depreciation charges for SLDC business for FY 2014-15. The Gross Fixed Assets as on 01.04.2014 are to the tune of ₹3664.83 crore (net of land and land rights). There is an addition of ₹5.78 crore (net of land and land rights) to Gross Fixed Assets due to capitalization of assets during FY 2014-15. Thus, closing balance of Fixed Assets as on 31.03.2015 is ₹5127.33 and ₹8.32 crore (net of land and land rights) for transmission Business and SLDC Business respectively.

The Commission approves depreciation charges of ₹217.31 crore for Transmission Business and ₹0.44 crore for SLDC business for FY 2014-15, based on Annual Audited Accounts.

2.8 Interest and Finance Charges

2.8.1 In the ARR Petition for FY 2014-15, PSTCL had claimed interest and finance charges on long term loan of ₹435.72 crore (net of capitalization ₹50.00 crore) for its Transmission Businessand ₹3.12 crore for SLDC Business. The Commission approved interest charges of ₹318.77 crore for Transmission Businessand ₹1.40 crore for SLDC Business.

2.8.2 In the ARR Petition for FY 2015-16, PSTCL had claimed interest and finance charges on long term loan of ₹334.28 crore (other than interest on working capital loans and net of capitalization of ₹120.00 crore) for its Transmission Business. Similarly, PSTCL had claimed ₹0.98 crore as interest and finance charges for SLDC Business. The Commission approved the revised the interest and finance charges of ₹207.17 (net of Capitalization of ₹120.00 crore) crore for Transmission Businessand ₹0.24 crore for SLDC Business at the time of review of FY 2014-15.

2.8.3 In the ARR Petition, PSTCL has claimed the Interest & Finance Charges on long term loan for FY 2014-15 as ₹437.24 crore for TransmissionBusiness and ₹0.16 crore for SLDC Business based on Audited Annual Accounts for FY 2014-15. The Interest and Finance charges allowable to PSTCL are discussed in the ensuing paragraphs.

2.8.4 **Investment Plan for Transmission Business**

In the ARR Petition for FY 2014-15, PSTCL had estimated a capital expenditure of ₹645.21 crore on long term loan against which the Commission had approved an investment plan of ₹500.00 crore for the Transmission Business of PSTCL in Tariff

Order for FY 2014-15. PSTCL had estimated the capital expenditure at ₹524.71 crore for FY 2014-15 in the ARR petition for FY 2015-16 against which the Commission had approved revised investment of ₹524.71 crore at the time of review of FY 2014-15. In the ARR Petition, PSTCL has claimed an investment plan of ₹567.64 crore during FY 2014-15 based on Audited Annual Accounts.

As per Audited Annual Accounts for FY 2014-15, the opening Capital Work in Progress as on 01.04.2014 is ₹1635.65 crore. Net asset addition during FY 2014-15 is of ₹1462.50 crore in Transmission Business and ₹2.54 crore in SLDC Business. Closing balance of Capital Work in Progress as on 31.03.2015 is of ₹1657.55 crore.

The Commission observes that PSTCL has raised a loan of ₹567.88 crore excluding GPF loan during FY 2014-15 against an investment of ₹567.64 crore. The Commission required further details on these loans from PSTCL, which were provided vide memo no 278/FA/MYT-1B dated 20.01.2017. On a perusal of the details, it is observed that loan addition of ₹60.00 crore (from SBOP) and another addition of ₹67.74 crore (from bank of India) are not in the nature of term loans. Accordingly, loan addition in Transmission Business works out ₹440.14 (567.88-60.00-67.74) crore. The interest is also re-worked by Commission on allowablelong termloans as ₹429.60 crore as given in the Table 2.3.

Table 2.3: Long Term Loan and Interest thereon for Transmission Business

(₹crore)

Sr. No.	Particulars	Loans as on April 1, 2014	Receipt of Loans during FY 2014-15	Repayment of Loans during FY 2014-15	Loans as on March 31, 2015	Amount of Interest
I	II	III	IV	V	VI	VII
1.	As per data furnished in ARR Petition (other than WCL & GP Fund)	3519.64	567.88	293.45	3794.07	437.24
2.	Approved by the Commission (other than WCL and GP Fund)	3519.64	440.14	293.45	3666.33	429.60

2.8.5 **Interest on GP Fund**

PSTCL has claimed an interest of ₹16.65 crore on GP fund of ₹175.64 crore (closing balance).The interest of ₹16.65 crore on GP Fund, being statutory payment, is allowed as claimed by PSTCL for FY 2014-15.

2.8.6 **Capitalization of Interest Charges**

PSTCL has capitalized ₹109.15 crore interest charges based on Audited Annual Accounts for FY 2014-15.

The Commission, as per past practice, approves capitalisation of interest of ₹109.15 crore for FY 2014-15 based on the Audited Annual Accounts.

2.8.7 **Finance Charges and Guarantee Charges**

PSTCL has claimed finance charges of ₹0.43 crore and Guarantee charges of ₹4.70 crore based on Audited Annual Accounts for FY 2014-15 for Transmission Business. However, finance charges as per Audited Annual Accounts of FY 2014-15 are of ₹0.41 crore. Accordingly, the Commission approves the finance charges of ₹0.41 crore and guarantee charges of ₹4.70 crore for FY 2014-15 for Transmission Businessof PSTCL.

The approved interest and finance charges for Transmission Business of PSTCL for FY 2014-15 are shown in Table 2.4.

Table 2.4: Interest & Finance Charges for Transmission Business

(₹crore)

Sr. No.	Particulars	Interest as Claimed by PSTCL	Amount allowed by the Commission
I	II	III	IV
1.	Interest on Institutional Loans	437.24	429.60
2.	Interest on GP Fund	16.65	16.65
3.	Guarantee Charges	4.70	4.70
4.	Finance charges	0.43	0.41
5.	**Gross Interest on Long Term Loans (1+2+3+4)**	**459.02**	**451.36**
6.	Less Capitalisation	109.15	109.15
7.	**Net Interest Charges on Long Term Loans (5-6)**	**349.87**	**342.21**

Therefore, the Commission approves interest & finance charges of ₹342.21 crore on long term loan for FY 2014-15 based on Audited Annual Accounts.

2.8.8 **Interest on Working Capital**

In the ARR Petition for FY 2014-15, PSTCL had claimed interest on working capital for Transmission Business of ₹51.09 crore for FY 2014-15 of which the Commission approved interest on working Capital of ₹28.76 crore for FY 2014-15.

In the ARR Petition for FY 2015-16, PSTCL had revised the claim of interest on working capital of ₹49.55 crore of which the Commission approved revised interest on working capital of ₹28.63 crore at the time of review.

In the ARR Petition, PSTCL has claimed interest on working capital of ₹33.59 crore @11.90% on the working capital loan of ₹282.28 crore for Transmission Business. Rate of interest on working capital is required to be calculated as per provisions contained in Regulation 30.1 of PSERC (Terms and Conditions for Determination of Tariff) Regulation, 2005 which has been further amended vide notification dated 17.09.2012. Accordingly, the Commission has calculated the working capital requirement and interest thereon 11.70% being the weighted average rate of interest for Transmission Business. The working capital requirement works out to ₹269.42 crore and the interest thereon works out to ₹31.52 crore as shown in Table 2.5.

Table 2.5: Interest on Working Capital for Transmission Business of PSTCL for FY 2014-15

(₹crore)

Sr. No.	Particulars	Approved by the Commission
I	II	III
1.	Receivables equivalent to two months	176.05
2.	Maintenance spares @ 15% of Operation and Maintenance expenses	60.02
3.	Operation and Maintenance expenses for one month	33.35
4.	Total Working Capital	269.42
5.	Interest on Working Capital calculated on Weighted Average Rate of Interest @11.70% for FY 2014-15	31.52

2.8.9 **Investment Plan for SLDC Business**

In the ARR Petition for FY 2014-15, PSTCL had proposed an investment of ₹33.80 crore for FY 2014-15 against which the Commission had approved ₹27.00 crore in the Tariff Order for FY 2014-15.

In the ARR for FY 2015-16, PSTCL revised investment plan to ₹16.91 crore against which the Commission approved revised amount of ₹1.00 crore for SLDC business for FY 2014-15at the time of review.

In the ARR Petition, PSTCL has submitted that it had made an investment of ₹0.90 crore in the SLDC Business though, there is an addition to loan of ₹0.66 crore to the opening balance of loan of ₹0.77 crore for SLDC Business and ₹0.16 crore interest charges on long term loan have been claimed on the loan of ₹1.43 crore for FY 2014-15.

The interest on allowable loans is worked out as indicated in Table 2.6.

Table 2.6: Long Term Loan and Interest thereon for SLDC Business

(₹crore)

Sr. No.	Particulars	Loans as on April 01, 2014	Receipt of loans during FY 2014-15	Repayment of loans during FY 2014-15	Loans as on March 31, 2015	Amount of Interest
I	II	III	IV	V	VI	VII
1.	As per data furnished by PSTCL in ARR Petition (other than WCL)	0.77	0.66	0.00	1.43	0.16
2.	Approved by the Commission (other than WCL)	0.77	0.66	0.00	1.43	0.16

Therefore, the Commission approves interest & finance charges of ₹0.16 crore during FY 2014-15 based on Audited Annual Accounts.

2.8.10 **Interest on Working Capital for SLDC Business**

In the ARR Petition for FY 2014-15, PSTCL had claimed interest on working capital of ₹1.52 crore on the total working capital of ₹10.51 crore. The Commission approved the working capital of ₹7.75 crore and interest on working capital of ₹0.52 crore for FY 2014-15.

In the ARR Petition for FY 2015-16, PSTCL had claimed interest on working capital of ₹1.02 crore on the total working capital of ₹6.93 crore for its SLDC Business. The Commission approved revised working capital of ₹4.54 crore and interest thereon of ₹0.55 crore for SLDC business of PSTCL at the time of Review FY2014-15.

In the ARR Petition, PSTCL has claimed ₹0.40 crore as interest @12.25% on Working Capital of ₹3.23 crore. Applying the same principle as stated above for Transmission Business, the Commission approves the total working capital requirement of ₹3.23 crore and interest thereon works out to ₹0.40 crore as given in Table 2.7.

Table 2.7: Interest on Working Capital for SLDC Business: FY 2014-15

(₹crore)

Sr. No.	Particulars	FY 2014-15	
		Claimed by PSTCL for SLDC	Approved by the Commission
I	II	III	IV
1.	Receivables equivalent to two months fixed cost	1.44	1.44
2.	Maintenance spares @15% of O&M expenses	1.15	1.15
3.	Operation & Maintenance expenses for one month	0.64	0.64
4.	Total working capital	3.23	3.23
5.	Interest on working capital calculated on Weighted Average Rate of Interest @12.25% for FY 2014-15	0.40	0.40

The Commission approves working capital of ₹3.23 crore and interest thereon of ₹0.40 crore for SLDC Business of PSTCL for FY 2014-15.

2.9 Return on Equity

2.9.1 In ARR Petition for FY 2014-15, PSTCL had claimed RoE of ₹93.91 crore on equity of ₹605.88 crore for FY 2014-15. The Commission had approved RoE of ₹93.90 crore. PSTCL did not claim any amount of RoE for its SLDC Business.

2.9.2 In ARR Petition for FY 2015-16, PSTCL has claimed a Return on Equity of ₹106.30 crore on equity amount of ₹685.78 crore for the Transmission Business for FY 2014-15 against which the Commission had approved RoE of ₹93.91 crore on equity ₹605.88 crore.

2.9.3 In ARR Petition, PSTCL has claimed RoE of ₹93.91 crore for FY 2014-15 as detailed in Table 2.8.

Table 2.8: Return on Equity for FY 2014-15 as claimed by PSTCL

(₹crore)

Sr. No.	Particulars	Amount
1.	Equity at the opening of FY 2014-15	605.88
2.	Internal accruals/ free reserves reckoned as paid up equity	0.00
3.	Pre-Tax % RoE	15.50%
4.	**RoE**	**93.91**

In accordance with the PSERC Tariff Regulations, the Commission allows RoE of ₹93.91 crore @15.5% on the equity of ₹605.88 crore.

The Commission, thus, approves RoE of ₹93.91 crore to PSTCL for FY 2014-15.

2.10 ULDC Charges

2.10.1 In the ARR Petition for FY 2014-15, PSTCL claimed ULDC Charges of ₹17.61 crore for FY 2014-15 for its SLDC Business. The Commission approved ₹17.61 crore of ULDC Charges for FY 2014-15.

2.10.2 In the ARR Petition for FY 2015-16, PSTCL claimed ₹8.00 crore towards ULDC charges for FY 2014-15 payable to PGCIL for its SLDC Business against which the Commission approved ₹8.00 crore at the time of Review.

2.10.3 In the ARR Petition, PSTCL has claimed ₹8.25 crore on account of ULDC charges for its SLDC Businessbased on Audited Annual Accounts for FY 2014-15.

Accordingly, the Commission approves ULDC charges of ₹8.25 crore to PSTCL for its SLDC Business for FY 2014-15.

2.11 Non-Tariff Income

2.11.1 In the ARR Petition for FY 2014-15, PSTCL had projected ₹8.05 crore of Non-Tariff Income for its Transmission Businessand ₹0.05 crore for SLDC Businessfor FY 2014-15. However, the Commission determined the Non-Tariff Income of ₹10.72 crore for Transmission Business and ₹3.32 crore for SLDC Businessfor FY 2014-15.

2.11.2 In the ARR Petition for FY 2015-16, PSTCL has claimed ₹14.61 crore on account of Non-tariff Income for Transmission Businessand ₹3.95 crore for SLDC Businessagainst which the Commission had approved revised amount ₹19.16 crore for Transmission business and ₹4.90 crore for SLDC Business at the time of Review FY2014-15.

2.11.3 In the ARR Petition, PSTCL has claimed ₹37.22 crore (₹28.81 crore for Transmission business and ₹8.41 crore for SLDC Business) on account of Non-Tariff Income based on Audited Annual Accounts for FY 2014-15 including income from Open Access customers as Transmission charges and operating charges. **Accordingly, the Commission approves ₹28.81 crore for Transmission Business and ₹8.41 crore for SLDC Business as Non-Tariff Income for FY 2014-15.**

2.12 Prior Period Expenses

2.12.1 In the ARR Petition, PSTCL has submitted ₹11.35 crore as prior period items based on Audited Annual Accounts for FY 2014-15. PSTCL has included the prior period expenses under concerned heads i.e. ₹0.006 crore under Employee expenses, ₹11.16 crore under depreciation, ₹0.007 crore under R&M expenses, ₹0.17 under ULDC charges and ₹0.01 under A&G cost.

2.12.2 As regards Employee expenses of ₹0.006 crore are concerned, the Commission is of the view that it has allowed employee expenses after working out these expenses on actual basis as per the judgment of Hon'ble APTEL dated 30.03.2015 in Review Petition No. 6 of 2015. Thus, the Commission allows ₹0.006 crore as prior period employee expenses to PSTCL for FY 2014-15.

2.12.3 As regards depreciation booked under prior period amounting to ₹11.16 crore is concerned, the Commission is of the view that deprecation has been allowed on the sub-head wise assets and also disallowed the depreciation provided in excess of 90% of the original cost of assets during the previous years. As such, the Commission finds no merit in the claim of PSTCL for additional depreciation as Prior Period Expenses and no amount is allowed on this account.

2.12.4 ULDC charges are allowed on actual basis as per the Audited accounts every year, hence ULDC charges of ₹0.17 crore are allowed by the Commission for SLDC Businessof PSTCL for FY 2014-15.

2.12.5 As regards A&G expenses of ₹0.01 crore and R&M expenses of ₹0.007 crore are concerned, the Commission is in the view that R&M expenses and A&G expenses are allowed on actual basis. Thus, the Commission allows ₹0.01 crore as A&G expenses and ₹0.007 crore as R&M expenses for the FY 2014-15.

Accordingly, the Commission allows ₹0.02 crore as Prior Period expenses for Transmission Business against ₹11.18 crore and ₹0.17 crore for SLDC Business against ₹0.17 crore as claimed by PSTCL for FY 2014-15.

2.13 Tax on Income

2.13.1 In ARR Petition for FY 2015-16, PSTCL has claimed Income Tax of ₹22.28 crore on return on equity of ₹106.30 crore @20.96%.As per the Regulation 32 of PSERC tariff Regulations, the payment of Income tax is required to be allowed on actual basis, limited to tax on RoE. As per Audited Annual Accounts of PSTCL, no income tax has been paid by the utility, accordingly, **nil amount is approved by the Commission on this account.**

2.14 Annual Revenue Requirement (ARR)

The summary of the ARR for Transmission Businessand SLDC Businessof PSTCL for FY 2014-15 is shown in Table 2.9 and Table 2.10 respectively.

Table 2.9: Annual Revenue Requirement for Transmission Business for FY 2014-15

(₹crore)

Sr. No.	Particulars	For Transmission Business				
		Approved in Tariff Order for FY 2014-15	Estimates for FY 2014-15 (RE)	Approved by the Commission in the review for FY 2014-15	Claimed by PSTCL in ARR based on Audited Annual Accounts	Final approved by the Commission
I	II	III	IV	V	VI	VII
1.	Employee Cost	298.66	396.65	322.31	349.90	344.97
2.	R&M expenses	46.45	101.19	50.98	36.05	36.05
3.	A&G expenses	21.56	23.50	23.50	29.37	19.12
4.	Depreciation	186.00	227.54	186.00	217.32	217.31
5.	Interest charges	318.77	334.28	207.17	349.87	342.21
6.	Interest on Working Capital	28.76	49.55	28.63	33.59	31.52
7.	Return on Equity	93.91	106.30	93.91	93.91	93.91
8.	Provision for Bad Debts and other Debits	0.00	0.00	0.00	0.00	0.00
9.	ULDC Charges	0.00	0.00	0.00	0.00	0.00
10.	Prior Period expenses	0.00	0.00	0.00	11.18	0.02
11.	Tax on Income	0.00	22.28	0.00	0.00	0.00
12.	Unrecovered amount of carrying cost from GoP	0.00	39.05	0.00	0.00	0.00
13.	Annual Revenue Requirement	**994.11**	**1300.35**	**912.50**	**1121.19**	**1085.11**
14.	Less: Non tariff Income	10.72	14.61	19.16	28.81	28.81
15.	Net Revenue Requirement	**983.39**	**1285.74**	**893.34**	**1092.38**	**1056.30**
16.	Incentive	**0.00**	**0.00**	**0.00**	**19.87**	**19.21**
17.	**Gross ARR**	**983.39**	**1285.74**	**893.34**	**1112.25**	**1075.51**

Table 2.10: Annual Revenue Requirement for SLDC for FY 2014-15

(₹crore)

Sr. No.	**Particulars**	**For SLDC Business**				
		Approved in T.O. for FY 2014-15	**Estimates for FY 2014-15 (RE)**	**Approved by the Commission in the review for FY 2014-15**	**Claimed by PSTCL in ARR based on Audited Annual Accounts**	**Final approved by the Commission**
I	**II**	**III**	**IV**	**V**	**VI**	**VII**
1.	Employee Cost	6.80	3.81	3.73	5.72	5.72
2.	R&M expenses	4.04	7.82	4.19	1.10	1.10
3.	A&Gexpenses	1.17	2.88	1.21	0.82	0.82
4.	Depreciation	1.45	0.74	1.44	0.44	0.44
5.	Interest charges	1.40	0.98	0.24	0.16	0.16
6.	Interest on Working Capital	0.52	1.02	0.55	0.40	0.40
7.	Return on Equity	0.00	0.00	0.00	0.00	0.00
8.	Provision for Bad Debts and otherDebits	0.00	0.00	0.00	0.00	0.00
9.	ULDC Charges	17.61	8.00	8.00	8.25	8.25
10.	Prior Period expenses	0.00	0.00	0.00	0.17	0.17
11.	**Annual Revenue Requirement**	**32.99**	**25.24**	**19.36**	**17.06**	**17.06**
12.	Less: Non tariff Income	3.32	3.95	4.90	8.41	8.41
13.	**Net Revenue Requirement**	**29.67**	**21.29**	**14.46**	**8.65**	**8.65**

The summary of the Annual Revenue Requirement of PSTCL as a whole for FY 2014-15 is shown in Table 2.11.

Table 2.11: Annual Revenue Requirement for PSTCL for FY 2014-15

(₹crore)

Sr. No.	Particulars	Approved in Tariff Order for FY 2014-15	Projected by PSTCL in RE for FY 2014-15	Approved in Review for FY 2014-15	Claimed by PSTCL in ARR based on Audited Annual Accounts	Final Approved by the Commission FY 2014-15
I	**II**	**III**	**IV**	**V**	**VI**	**VII**
1.	Employee Cost	305.46	400.46	326.04	355.62	350.69
2.	R&M expenses	50.49	109.01	55.17	37.15	37.15
3.	A&G expenses	22.73	26.38	24.71	30.19	19.94
4.	Depreciation	187.45	228.28	187.44	217.75	217.75
5.	Interest charges	320.17	335.26	207.41	350.03	342.37
6.	Interest on working capital	29.28	50.57	29.18	33.99	31.92
7.	Return on Equity	93.91	106.30	93.91	93.91	93.91
8.	ULDC Charges	17.61	8.00	8.00	8.25	8.25
9.	Prior Period Expenses	0.00	0.00	0.00	11.35	0.19
10.	Income Tax	0.00	22.28	0.00	0.00	0.00
11.	Unrecovered amount of carrying cost from GoP	0.00	39.05	0.00	0.00	0.00
12.	**Annual Revenue Requirement**	**1027.10**	**1325.59**	**931.86**	**1138.24**	**1102.17**
13.	Less: Non tariff income	14.04	18.56	24.06	37.22	37.22
14.	**Total Revenue Requirement**	**1013.06**	**1307.03**	**907.80**	**1101.02**	**1064.95**
15.	Incentive for Higher Transmi-ssion System Availability	0.00	0.00	0.00	19.87	19.21
16.	**Net Revenue Requirement**	**1013.06**	**1307.03**	**907.80**	**1120.90**	**1084.16**
17.	**Revenue from Tariff**					**895.66**
18.	**Gap {Deficit(-)/ Surplus(+)} for the year**					**(-)188.50**

The Revenue from Tariff of ₹895.66 crore considered by PSTCL in Audited Annual Accounts for FY 2014-15, which was approved by the Commission in its Tariff Oder of FY 2014-15 dated 22nd August, 2014 at the time of projections, was re-determined at ₹907.80 crore at the time of Review. The carrying cost on Revenue Gap of ₹12.14 (907.80-895.66) crore has already been allowed in Tariff Order for FY 2015-16.

The net ARR after truing up exercise for FY 2014-15 is determined as ₹1084.16 crore and the same is carried forward in True up of PSPCL for FY 2014-15 as

Transmission Charges payable. After considering the revenue gap of ₹12.14 crore already accounted for, the net gap works out to ₹176.36 (188.50-12.14) crore for FY 2014-15, which has been taken into account for calculating the carrying cost in Para 4.14 of this Tariff Order.

Recoverable amount of ₹188.50 crore for FY 2014-15 is also being added in the total amount recoverable for FY 2016-17 in Para 4.15 of this Tariff Order.

Chapter 3
True up for FY 2015-16

3.1 Background

The Commission had approved the ARR and Tariff for FY 2015-16 in its Tariff Order dated 05.05.2015, which was based on costs and revenue estimated by the Punjab State Tranmission Corporation Limited (PSTCL) for its Transmission and SLDC functions.

PSTCL in its ARR for FY 2016-17 had submitted the revised estimates of costs and revenue for FY 2015-16. The Commission considered it appropriate and fair to revisit and review the approvals granted by it for FY 2015-16 with reference to the revised estimates made available by PSTCL and accordingly approved the revised ARR for FY 2015-16 in the Review.

PSTCL in the ARR for MYT Control Period from FY 2017-18 to FY 2019-20, has submitted that it had filed an interim application dated September 8, 2016, along with Review Petition on Tariff Order for FY 2016-17 dated July 26, 2016, seeking clarifications with regard to adjustment of past revenue gaps/surplus. The Commission issued Order on November 21, 2016 on the interim application filed by PSTCL. It was further submitted by PSTCL that it has not been possible on the part of PSTCL to complete the audit of accounts for FY 2015-16 and file the same with the Commission for true up by 30th November, 2016. PSTCL further submitted that the truing up exercise may be undertaken only on the basis of audited annual accounts. Since the audited accounts for FY 2015-16 were not available, it was submitted that the truing up exercise may be undertaken for FY 2015-16 after the finalization of audited annual accounts. Further, PSTCL prayed to the Commission to consider provisional figure of capital expenditure, expenditure capitalized, fixed assets, loan raised relating to FY 2015-16, in order to arrive at the interest charges and depreciation for FY 2016-17.

PSTCL submitted petition vide letter no. 1472/FA/MYT-1/2017-18 dated 12.05.2017 for true up of FY 2015-16, along with audited annual accounts, and prayed that the truing up of costs and revenue for FY 2015-16 may be undertaken by the Commission. The Commission has decided to take the petition on record of the Commission as Petition No. 34 of 2017. As the Tariff Order for MYT Control Period from FY 2017-18 to FY 2019-20 is under process, the Commission decision in respect of Petition No. 34 of 2017 in the Tariff Order for MYT Control Period from FY 2017-18 to FY 2019-20 in case of Petition No. 89 of 2016.

The figures supplied by PSTCL in Petition No. 34 of 2017 vary in parts with the figures taken into account in the Review for FY 2015-16 by the Commission. This Chapter contains a final true up of FY 2015-16, based on audited figures, as submitted by PSTCL in Petition No. 34 of 2017.

3.2 Transmission System Availability

3.2.1 PSTCL, in Petition No. 34 of 2017 for true up of FY 2015-16, has submitted month-wise average Transmission System Availability for FY 2015-16, as shown in Table 3.1(a).

Table 3.1(a): Transmission System Availability of PSTCL for FY 2015-16

Sr.No.	Month	Availability (%)
1.	April, 2015	99.91
2.	May, 2015	99.93
3.	June, 2015	99.94
4.	July, 2015	99.96
5.	August, 2015	99.95
6.	September, 2015	99.96
7.	October, 2015	99.96
8.	November, 2015	99.97
9.	December, 2015	99.93
10.	January, 2016	99.89
11.	Feburary, 2016	99.98
12.	March, 2016	99.96
	Average Availability	**99.95**

3.2.2 Incentive on Transmission System Availability

PSTCL has submitted, in Petition No. 34 of 2017 for true up of FY 2015-16, that as per PSERC Tariff Regulations, it is eligible for incentive for over achieving the availability targets for transmission system availability, which has been verified and certified by SLDC.

PSTCL has submitted the net transmission charges, inclusive of incentive on the basis of fixed charges for STU, as given in Table 3.1(b).

Table 3.1(b): Incentive on Transmission System Availability for FY 2015-16 submitted by PSTCL

(₹crore)

Sr. No.	Month	Monthly Transmission Charges	Transmission Charges including Incentive	Incentive
1.	April, 2015	97.22	99.12	1.89
2.	May, 2015	100.47	102.44	1.98
3.	June, 2015	97.22	99.15	1.92
4.	July, 2015	100.47	102.47	2.01
5.	August, 2015	100.47	102.46	2.00
6.	September, 2015	97.22	99.17	1.94
7.	October, 2015	100.47	102.47	2.01
8.	November, 2015	97.22	99.18	1.95
9.	December, 2015	100.47	102.44	1.98
10.	January, 2016	100.47	102.40	1.94
11.	Feburary, 2016	93.98	95.88	1.90
12.	March, 2016	100.47	102.47	2.01
	Total	**1186.14**	**1209.68**	**23.54**

PSTCL has prayed to approve incentive of ₹23.54 crore for transmission system availability, for FY 2015-16.

The Commission has determined the incentive for achieving transmission system availability more than the norms laid by the Commission,as per approved ARR of Transmission Business as ₹1129.96 crore in this Tariff Order (refer Table 3.9) as shown in Table 3.1(c).

Table 3.1(c): Incentive on Transmission System Availability for FY 2015-16 determined by the Commission

Sr. No.	Month	Availability (%)	Monthly Transmission Charges (₹ crore)	Transmission Charges inclusive of Incentive (₹ crore)	Incentive (₹ crore)
I	II	III	IV	V	VI
1.	April, 2015	99.91	92.62	94.43	1.81
2.	May, 2015	99.93	95.71	97.59	1.88
3.	June, 2015	99.94	92.62	94.45	1.83
4.	July, 2015	99.96	95.71	97.62	1.91
5.	August, 2015	99.95	95.71	97.61	1.90
6.	September, 2015	99.96	92.62	94.47	1.85
7.	October, 2015	99.96	95.71	97.62	1.91
8.	November, 2015	99.97	92.62	94.48	1.86
9.	December, 2015	99.93	95.71	97.59	1.88
10.	January, 2016	99.89	95.71	97.56	1.85
11.	Feburary, 2016	99.98	89.53	91.34	1.81
12.	March, 2016	99.96	95.69	97.60	1.91
	Total		**1129.96**		**22.40**

The Commission has determined incentive of ₹22.40 crore for achieving transmission system availability more than the norms laid by the Commission, during FY 2015-16, which the Commission approves.

3.3 Transmission Loss

PSPCL in the ARR Petition for FY 2015-16, had prayed the Commission to approve the transmission loss at 4.00% for FY 2015-16. The Commission had approved the Transmission Loss for PSTCL system provisionally at 2.5% for FY 2015-16, in the Tariff Order for FY 2015-16. It was also decided that the Commission will revisit theTransmission Loss of PSTCL, while undertaking the review/true up for FY 2014-15, after the intra-state boundary meters are provided and energy audit is conducted.

PSTCL in the ARR for FY 2016-17, hadsubmitted the losses for the months of June and July, 2015 are 2.19% and 2.88% respectively, arrived at by considering the net energy inter-exchange measured through ABT meters installed at boundary interface points of PSTCL with interstate sub-stations, with generating plants of PSPCL & IPPs and with PSPCL`s distribution system side.However, PSTCL also submitted that concerned system integrator/contractor for implementing the project, has stopped the work. Hence, meters data for subsequent months, i.e. August, 2015 onwards, is not available in the SLDC remotely. Due to pendency of installation of Intra-State Boundary Metering-cum-Transmission Level Energy Audit Scheme necessary to arrive at accurate transmission losses, the Commission retained the transmission losses at 2.5%, as approved in the Tariff Order for FY 2015-16. The Commission further ordered that this will be re-visited during true up, after the boundary meters are made functional and energy audit is done.

PSTCL in Petition No. 34 of 2017 for true up of FY 2015-16, has submitted that the transmission loss figures are not available for FY 2015-16, and has prayed to the Commission to approve the transmission lossess as requested in the ARR and Tariff Petition for FY 2015-16.

The Commission notes that actual Transmission Loss of Transmission System of PSTCL could not be determined in the absence of installation of Intra-State Boundary Metering-cum-Transmission Level Energy Audit Scheme. **As such, the Commission approves the Transmission Loss of 2.5% for FY 2015-16.**

3.4 Employee Cost

3.4.1 In the ARR Petition for FY 2015-16, PSTCL had projected employee expenses of ₹427.07 crore for its Transmission Business and ₹4.19 crorefor its SLDC Business for FY 2015-16. The Commission had approved employee cost of ₹337.79 crore for

Transmission Business and ₹4.08 crore for SLDC Business to PSTCL for FY 2015-16.

3.4.2 In the ARR Petition for FY 2016-17, PSTCL had submitted revised estimates of employee cost of ₹378.00 crore for Transmission Business and had claimed ₹6.40 crore for SLDC Business for FY 2015-16. The Commission approved therevised employee cost of ₹343.98 crore for Transmission Business and ₹6.78 crore for SLDC Business of PSTCL at the time of Review of FY 2015-16.

3.4.3 In the True Up Petition for FY 2015-16, PSTCL has submitted employee expenses of ₹397.53 crore for Transmission Business and ₹6.44 crore for SLDC Business based on Audited Annual Accounts for FY 2015-16. The detail of Employee Cost claimed by PSTCL for 2015-16 is summarized in Table 3.2.

Table 3.2 : Employee Cost claimed by PSTCL for FY 2015-16

(₹crore)

Sr. No.	Particulars	Transmission	SLDC	PSTCL
1.	Terminal Benefits	231.38	0.01	231.39
2.	Other Employee Cost	165.05	6.37	171.42
3.	Arrears of pay revision	1.10	0.06	1.16
Total Employee Cost		**397.53**	**6.44**	**403.97**

3.4.4 As per the provisions of Regulation 28of PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, terminal benefits are allowed on actual basis.

3.4.5 The terminal benefits are required to be apportioned and allowed in the ratio of 88.64% and 11.36% between PSPCL and PSTCL respectively as per Transfer Scheme. PSTCL's share @11.36% of terminal benefits has been depicted as ₹229.40 crore in the Audited Annual Accounts for PSTCL.

Thus, the Commission allows terminal benefits of ₹229.39 crore for Transmission Business and ₹0.01 crore for SLDC Business of PSTCL for FY 2015-16.

3.4.6 In accordance with Commission's Order dated 14.10.2015, amendment to PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 has been issued vide notification No. 108 dated 15.10.2015 (5th amendment) which is applicable from the date of publication dated 16.10.2015. As per this amendment, inflation factor to be used for indexing the 'other employee cost' will be combination of the Consumer Price Index (CPI) and Wholesale Price Index (WPI) of nth year and shall be calculated as (0.50*CPIn+0.50*WPIn).

3.4.7 For the period from 01.04.2015 to15.10.2015, it is pertinent to discuss the Hon'ble

APTEL's judgment dated 30.03.2015 in Review Petition No.6 of 2015, wherein the Hon'ble APTEL held that "*actual costs need to be considered*. The Commission vide its Order dated 14.10.2015 decided that "*the Judgments of Hon'ble APTEL, in so far as Employee Cost for FY 2012-13, 2013-14, 2014-15 etc. of PSPCL and PSTCL is concerned, shall be implemented during true-up exercise of ARRs for these years after applying prudence check*". As such, the Commission approves 'Other Employee Cost'of ₹89.29 crore for Transmission Business and ₹3.45 crore for SLDC Business based on Audited Annual Accounts for the first 198 days of FY 2015-16 i.e. from 01.04.2015 to 15.10.2015.

The 'Other Employee Cost' in the true up for FY 2011-12 has been approved at ₹92.20 crore for TransmissionBusiness and ₹5.72 crore for SLDC Business in Tariff Order for FY 2014-15. Wholesale Price Index (All Commodities) of 100 for FY 2011-12 has increased to 109.70 for FY 2015-16, thereby accounting for 9.70% increase in WPI. As per Regulations, increase in 'other employee cost' is to be limited to average Wholesale Price Index (WPI) on the base 'other employee cost' approved for FY 2011-12. Also, Consumer Price Index (CPI) increase is calculated @36.02% (index of base year 2011-12 increased from 194.83 to 265.00 in FY 2015-16. The combination of 0.50 of WPI+0.50 of CPI increase will be an increase of 22.86% (9.70+36.02/2) which is applicable from 16.10.2015 to 31.03.2016 i.e. 168 days on the other employee cost approved for the base year FY 2011-12.The 'Other Employee Cost' for FY 2015-16 works out to ₹52.00 crore for Transmission Business and ₹3.23 crore for SLDC Business for 168 days.

As per Regulations, increase in 'Other Employee Cost' is to be limited to average Wholesale Price Index (WPI) on the base employee cost approved for FY 2011-12. As stated above, PSTCL has submitted ₹165.05 crore as 'Other Employee Cost' for Transmission Business and ₹6.37 crore for its SLDC Business based on Audited Annual Accounts.Accordingly, the Commission approves 'Other Employee Cost' of ₹141.29 (52.00+89.29)crore for Transmission Business and ₹6.37 (3.23+3.45)crore for SLDC Business for FY 2015-16.

PSTCL has also claimed ₹1.10 crore as arrear of pay revision for Transmission Business paid during the year 2015-16. The Commission allows ₹1.10 crore as arrear of pay for FY 2015-16 for Transmission Business. PSTCL has also claimed ₹0.06 crore as arrear of pay revision for SLDC Business and same is allowed.

Therefore, the Commission allows total Employee Cost of ₹371.78 (229.39+1.10+141.29) crore for Transmission Business and ₹6.44

(6.37+0.01+0.06) crore for SLDC Business based on Audited Annual Accounts for FY 2015-16.

3.5 Repair and Maintenance (R&M) Expenses

3.5.1 In the ARR Petition for FY 2015-16, PSTCL projected R&M expenses of ₹123.58 crore for its Transmission Business and ₹13.48 crore for its SLDC Business for FY 2015-16 against which the Commission approved ₹57.98 crore and ₹4.55 crore as R&M expenses for Transmission Business and SLDC Business of PSTCL respectively.

3.5.2 In the ARR Petition for FY 2016-17, PSTCL revised its claim of R & M expenses to ₹41.39 crore for its Transmission Business and ₹2.97 crore for its SLDC Business. The Commission approved the revised R&M expenses of ₹46.75 crore for Transmission Business and ₹3.98 crore for SLDC Business of PSTCL during the Review of FY 2015-16.

3.5.3 In the True Up Petition for FY 2015-16, PSTCL has claimed total R&M expenses of ₹33.80 crore (₹33.62 crore for Transmission Business and ₹0.18 crore for its SLDC Business) based on the Audited Annual Accounts for FY 2015-16.

3.5.4 As per Regulations 28 of PSERC Tariff Regulation 2005, O&M expenses approved by the Commission for the year 2011-12 (True-up) are to be considered as base O&M expenses for subsequent year. The Commission had approved R&M expenses of ₹25.92 crore for Transmission Business and ₹1.93 crore for SLDC Business for FY 2011-12 in para 3.5.7 of Tariff Order FY 2014-15, on Gross Fixed Assets of ₹5265.17 crore and ₹5.50 crore as on 01.04.2012 for Transmission Business and SLDC Business respectively.

3.5.5 Regulation 28 of the PSERC Tariff Regulations, 2005 amended on 17.09.2012 provides for adjusting base O&M expenses approved by the Commission in the True-up of FY 2011-12 in proportion to increase in Whole Sale Price Index (all Commodities) to determine O&M expenses forthe subsequent year.The Gross Fixed Assets as on 01.04.2015 are to the tune of ₹8054.17 crore for Transmission Business and ₹8.32 crore for SLDC Business. Therefore, base R&M expenses for FY 2015-16 work out to ₹39.65 (25.92/5265.17*8054.17) crore for Transmission Business and ₹2.92 (1.93/5.50*8.32) crore for SLDC Business. The R&M expenses work out to ₹43.50 (₹39.65*109.70/100) crore for Transmission Business and ₹3.20 (2.92*109.70/100) crore for SLDC Business for FY 2015-16, by applying WPI increase @9.70% on the base R&M expenses.

PSTCL has an addition of assets worth ₹330.92 crore and ₹6.46 crore for Transmission and SLDC Business respectively. In the absence of actual dates of commissioning of the addition in assets, these assets have been considered for 6 months on an average.The opening balance of Gross Fixed Assets as on 01.04.2015 is ₹8054.17 crore and ₹8.32 crore and closing balance is ₹8385.09 and ₹14.78 crore for Transmission Business and SLDC Business respectively. The average percentage rate of R&M expenses of ₹43.50 crore for assets of ₹8054.17 crore works out to 0.54% (43.50/8054.17). By applying the average rate of 0.54% on addition of assets of ₹330.92 crore for half year, the allowable R&M expenses for FY 2015-16 work out to ₹0.89 [(330.92/2) x 0.54%] crore. Thus, the total R&M expenses for Transmission Business works out to be ₹44.39 (43.50+0.89) crore. However, PSTCL has claimed ₹33.62 crore as R&M expenses for Transmission Business based on Audited Annual Accounts. **Therefore, the Commission accordingly allows ₹33.62 crore as R&M expenses for Transmission Business.**

3.5.6 There was an addition of assets of ₹6.46 crore for SLDC Business during FY 2015-16. In the absence of actual dates of commissioning of the addition in assets, these assets have been considered for 6 months on an average. The average percentage rate of R&M expenses of ₹3.20 crore for asset of ₹8.32 crore works out to 38.49% (3.20/8.32*100). By applying the average rate of 38.49% on addition of assets of ₹6.46 crore for half year, the allowable R&M expenses for FY 2015-16 works out to ₹1.24 [(6.46/2) x 38.49%] crore. Thus, the total R&M expenses for SLDC Business work out to ₹4.44 (3.20+1.24) crore. However, the PSTCL has claimed ₹0.18 crore as R&M expenses for SLDC Business based on the Audited Annual Accounts. Therefore, the Commission allows ₹0.18 crore as R&M expenses for SLDC Business.

In view of above, the Commission approves ₹33.80 (₹33.62 crore for Transmission Business + ₹0.18 crore for SLDC Business) crore of R&M expenses for FY 2015-16.

3.6 Administration and General (A&G) Expenses

3.6.1 In the ARR Petition for FY 2015-16, PSTCL projected A&G expenses of ₹28.53 crore for its Transmission Business and ₹4.96 crore for its SLDC Business crore for FY 2015-16, against which the Commission approved ₹26.77 crore and ₹1.31 crore as A&G expenses for Transmission Business and SLDC Business of PSTCL respectively.

In the ARR Petition for FY 2016-17, PSTCL revised its claim of A&G expenses ofTransmission Business to ₹21.96 crore and ₹3.27 crore for SLDC Business. The Commission approved the revised A&G expenses as ₹21.49 crore for Transmission Business and ₹1.15 crore for SLDC Business of PSTCL at the time of Review of FY 2015-16.

3.6.2 In the True up Petition for FY 2015-16, PSTCL has claimed total A&G expenses of ₹16.55 crore (₹15.90 crore for Transmission Business and ₹0.65 crore for its SLDC Business) based on the Audited Annual Accounts for FY 2015-16.

3.6.3 The Commission, in accordance with Regulation 28 of the PSERC Tariff Regulations, 2005 (amended on 17.09.2012), took into account an increase of 9.70%in WPI. In the Tariff Order 2014-15, the Commission approved ₹11.59 crore for Transmission Business and ₹0.56 for SLDC Business for FY 2011-12 on Gross Fixed Assets of ₹5265.17 crore and ₹5.50 crore as on 01.04.2012 for Transmission Business and SLDC Business respectively.

3.6.4 Opening GFA as on 01.04.2015 are to the tune of ₹8054.17 crore for Transmission Business and ₹8.32 crore for SLDC Business. Therefore, base A&G expenses for FY 2015-16 work out to ₹17.73 (11.59/5265.17*8054.17) crore for Transmission Business and ₹0.85 (0.56/5.50*8.32) crore for SLDC Business.The A&G expenses work out to ₹19.45 (₹17.73*109.70/100) crore for Transmission Business and ₹0.93 (0.85*109.70/100) crore for SLDC Business for FY 2015-16by applying WPI increase @9.70% on the base A&G expense.

3.6.5 In accordance with Regulation 28 of the PSERC Tariff Regulations, the A&G expenses are allowable for additional assets added during the year on pro–rata basis from the date of commissioning of assets. Fixed assets approved to be added during the year are considered as having remained in service for six months on an average during the year as the actual dates of commissioning of assets added during the year have not been mentioned / made available.

3.6.6 In the absence of actual dates of commissioning of the addition in assets, these assets have been considered for 6 months on an average. The opening value of GFA as on 01.04.2015 was ₹8054.17 crore for STU and ₹8.32 crore for SLDC. The average percentage rate of A&G expenses of ₹19.45 crore for assets of ₹8054.17 crore works out to 0.24% (19.45/8054.17). By applying the average rate of 0.24% on addition of assets of ₹330.92 crore for half year, the allowable R&M expenses for FY 2015-16 work out to ₹0.40 [(330.92/2) x 0.24%] crore. Thus, the total A&G expenses for Transmission Business works out to be ₹19.85 (19.45+0.40) crore.

3.6.7 Similarly, there was an addition of assets of ₹6.46 crore for SLDC Business during

FY 2015-16. The average percentage rate of A&G expenses of ₹0.93 crore for asset of ₹8.32 crore works out to 11.17% (0.93/8.32*100). By applying the average rate of 11.17% on addition of assets of ₹6.46 crore for half year, the allowable A&G expenses for FY 2015-16 works out to ₹0.36 [(6.46/2) x 11.17%] crore. Thus, the total A&G expenses for SLDC Business work out to ₹1.29 (0.93+0.36) crore.

PSTCL has also claimed an amount of ₹0.28 crore as Audit Fee and ₹0.51 crore as Licence fee. As such, the total amount of PSTCL for Transmission Business works out to ₹20.64 (19.85+0.28+0.51) crore. The total A&G expenses for SLDC Business work out to ₹1.29, however, PSTCL has claimed ₹15.90 crore in Transmission Business and ₹0.65 crore in SLDC Business, based on the Audited Annual Accounts.**Thus, the Commission approves the A&G expenses of ₹15.90 crore for Transmission Business and ₹0.65 crore for SLDC Business for FY 2015-16.**

3.7 Depreciation Charges

3.7.1 In the ARR Petition of FY 2015-16, PSTCL had claimed depreciation charges of ₹232.96 crore on assets valued at ₹4619.81 crore against which the Commission had approved depreciation charges of ₹223.01 crore for Transmission Business and ₹1.60 crore for SLDC Business for FY 2015-16.

3.7.2 In the ARR Petition for FY 2016-17, PSTCL revised its claim of depreciation to ₹283.42 crore for Transmission Business and ₹0.61 crore for SLDC Business for FY 2015-16. The Commission approved revised depreciation charges as ₹188.96 crore for Transmission Business and ₹0.42 crore for SLDC Business at the time of Review of FY 2015-16.

3.7.3 In the true Up Petition for FY 2015-16, PSTCL has claimed ₹245.92 crore as depreciation charges for Transmission Business and ₹0.52 crore for SLDC Business. The Gross Fixed Assets as on 01.04.2015 (net of land and land rights) are to the tune of ₹5127.33 crore and ₹8.32 crore for Transmission Business & SLDC Business respectively. There is an addition (net of land and land rights) of ₹330.88 crore for Transmission Business and ₹6.46 crore for SLDC Business to Gross Fixed Assets due to capitalization of assets during FY 2015-16. Thus, closing balance of Fixed Assets as on 31.03.2016 (net of land and land rights) is ₹5458.21 crorefor Transmission Business and ₹14.78 crore for SLDC Business.

The Commission allows depreciation of ₹245.92 crore for Transmission Business and ₹0.52 crore for SLDC Business based on Audited Annual Accounts of PSTCL for FY 2015-16.

3.8 Interest and Finance Charges

3.8.1 In the ARR Petition for FY 2015-16, PSTCL had claimed interest and finance charges on long term loan of ₹430.11 crore (net of capitalization ₹39.92 crore) for its Transmission Business and ₹4.01 crore for SLDC Business. The Commission approved interest charges of ₹303.60 crore for Transmission Business and ₹2.09 crore for SLDC Business.

3.8.2 In the ARR Petition for FY 2016-17, PSTCL had claimed interest and finance charges on long term loan of ₹426.69 crore (other than interest on Working capital loans and net of capitalization of ₹39.90 crore) for its Transmission Business and ₹0.47 crore for SLDC Business. The Commission approvedthe revised interest and finance charges of ₹420.38 (net of Capitalization of ₹39.90 crore) crore for Transmission Business and ₹0.47 crore for SLDC Business at the time of Review of FY 2015-16.

In the True Up Petition for FY 2015-16, PSTCL has claimed the Interest & Finance Charges of ₹413.37 crore for Transmission Business and ₹0.34 crore for SLDC Business based on Audited Annual Accounts for FY 2015-16. The Interest and Finance charges allowable to PSTCL are discussed in the ensuing paragraphs.

3.8.3 **Investment Plan for Transmission Business**

In the ARR Petition for FY 2015-16, PSTCL had estimated a capital expenditure of ₹503.37 crore against which the Commission had approved an investment plan of ₹503.37 crore for the Transmission Business of PSTCL in Tariff Order of FY 2015-16. PSTCL revised its capital expenditure to ₹644.58 crore for FY 2015-16 in the ARR petition for FY 2016-17 against which the Commission had approved therevised investment of ₹350 crore for Transmission Business at the time of Review of FY 2015-16. In the true Up Petition for FY 2015-16, PSTCL has claimed an investment plan of ₹411.17 crore during FY 2015-16 based on Audited Annual Accounts.

As per Audited Annual Accounts for FY 2015-16, the opening Capital Work in Progress as on 01.04.2015 is ₹738.48 crore and ₹1.23 crore for transmission and SLDC Business respectively. Net asset addition during FY 2015-16 is of ₹330.88 crore in Transmission Business and ₹6.46 crore in SLDC Business. Closing balance of Capital Work in Progress as on 31.03.2016 is of ₹756.88 crore and ₹4.76 crore for transmission and SLDC Business respectively.

The Commission observes that PSTCL has raised a loan of ₹413.24 crore.As discussed in Para 2.8.4 of this Tariff Order, loan from Bank of India amounting to ₹70.71 crore is not in the nature of long term loan.Accordingly, the Commission determines loan requirement of the utility at ₹342.53 (413.24-70.71) crore. The interest is re-worked by Commission on allowable loans as ₹440.04 crore as given in the Table 3.3 below:

Table 3.3: Long term loan and interest thereonfor Transmission Business

(₹crore)

Sr. No.	Particulars	Loans as on April 01, 2015	Receipt of Loans during FY 2015-16	Repayment of Loans during FY 2015-16	Loans as on March 31, 2016	Amount of Interest
I	II	III	IV	V	VI	VII
1.	As per data furnished in ARR Petition (other than WCL & GP Fund)	3794.07	413.24	358.25	3849.06	458.96
2.	Approved by the Commission (other than WCL and GP Fund)	3666.33	342.53	347.14	3661.72	440.04

3.8.4 **Interest on GP Fund**

PSTCL has claimed an interest of ₹14.40 crore on GP fund of ₹153.69 crore. The interest of ₹14.40 crore on GP Fund, being statutory payment, is allowed as claimed by PSTCL for FY 2015-16.

3.8.5 **Capitalization of Interest Charges**

In the True Up Petition for FY 2015-16, PSTCL has capitalized ₹67.97 crore interest charges based on Audited Annual Accounts for FY 2015-16.

The Commission, as per past practice, approves capitalisation of interest of ₹67.97 crore for FY 2015-16 based on the Audited Annual Accounts.

3.8.6 **Finance Charges and Guarantee Charges**

PSTCL has claimed finance charges of ₹1.48 crore and Guarantee charges of ₹6.50 crore based on Audited Annual Accounts for FY 2015-16 for Transmission Business. The Commission, accordingly, approves the finance charges of ₹1.48 crore and Guarantee charges of ₹6.50 crore for FY 2015-16 for Transmission Business of PSTCL.

The approved interest and finance charges for Transmission Business of PSTCL for FY 2015-16 are shown in Table 3.4.

Table 3.4: Interest & Finance Charges for Transmission Business for FY 2015-16

(₹crore)

Sr. No.	Particulars	Interest as Claimed by PSTCL	Amount allowed by the Commission
I	**II**	**III**	**IV**
1.	Interest on Institutional Loans	458.96	440.04
2.	Interest on GP Fund	14.40	14.40
3.	Guarantee Charges	6.50	6.50
4.	Finance charges	1.48	1.48
5.	**Gross Interest on Long Term Loans (1+2+3+4)**	**481.34**	**462.42**
6.	Less Capitalisation	67.97	67.97
7.	**Net Interest Charges on Long Term Loans (5-6)**	**413.37**	**394.45**

Therefore, the Commission approves interest & finance charges of ₹394.45 crore on long term loan for FY 2015-16 based on Audited Annual Accounts.

3.8.7 **Interest on Working Capital**

In the ARR Petition for FY 2015-16, PSTCL had claimed interest on working capital for Transmission Business of ₹55.68 crore for FY 2015-16 against which the Commission approved interest on working Capital of ₹34.25 crore for FY 2015-16.

In the ARR Petition for FY 2016-17, PSTCL had revised the claim of interest on working capital to ₹38.51 crore of which the Commission approvedthe revised interest on working capital of ₹32.90 crore at the time of Review of FY 2015-16.

In the True Up Petition for FY 2015-16, PSTCL has claimed interest on working capital of ₹36.56 crore @11.95% on the working capital loan of ₹305.93 crore for Transmission Business. Rate of interest on working capital is required to be calculated as per provisions contained in Regulation 30.1 of PSERC (Terms and Conditions for Determination of Tariff) Regulation, 2005 which has been further amended vide notification dated 17.09.2012.

The Commission approves interest on working capital of ₹33.75 crore @11.95% on working capital requirement of ₹282.45 crore for Transmission Business. The same is discussed in Table 3.5.

Table 3.5: Interest on Working Capital for Transmission Business of PSTCL for FY 2015-16

(₹crore)

Sr. No.	Particulars	Approved by the Commission
I	II	III
1.	Receivables equivalent to two months	188.33
2.	Maintenance spares @ 15% of Operation and Maintenance expenses	63.19
3.	Operation and Maintenance expenses for one month	35.11
4.	Working Capital requirements	286.63
5.	Interest on Working Capital calculated on Weighted Average Rate of Interest @11.95% for FY 2015-16	34.25

The Commission approves working capital requirements of ₹286.63 crore and interest thereon of ₹34.25 crore for Transmission Business of PSTCL for FY 2015-16.

3.8.8 **Investment Plan for SLDC Business**

In the ARR Petition for FY 2015-16, PSTCL had proposed an investment of ₹32.91 crore for FY 2015-16 against which the Commission had approved ₹21.75 crore in the Tariff Order for FY 2015-16.

In the ARR for FY 2016-17, PSTCL revised investment plan to ₹7.02 crore against which the Commission approvedthe revised amount ₹7.02 crore for SLDC Business in the review for FY 2015-16.

In the True Up Petition for FY 2015-16, PSTCL has submitted that it had made an investment of ₹4.37 crore in the SLDC Business though, there is an addition to loan of ₹2.30 crore to the opening balance of loan of ₹1.43 crore for SLDC Business and ₹0.34 crore interest charges on long term loan have been claimed during for FY 2015-16.

The interest on allowable loans (other than working capital loans) is worked out as indicated in Table 3.6.

Table 3.6: Long term loan and interest thereon for Interest Charges (for SLDC Business for FY 2015-16

(₹crore)

Sr. No.	Particulars	Loans as on April 01, 2015	Receipt of loans during FY 2015-16	Repayment of loans during FY 2015-16	Loans as on March 31, 2016	Amount of Interest
I	II	III	IV	V	VI	VII
1.	As per data furnished by PSTCL in ARR Petition (other than WCL)	1.43	2.30	0.00	3.73	0.34
2.	Approved by the Commission (other than WCL)	1.43	2.30	0.00	3.73	0.34

Therefore, the Commission approves interest & finance charges of ₹0.34 crore to PSTCL during FY 2015-16.

3.8.9 **Interest on Working Capital for SLDC Business**

In the ARR Petition for FY 2015-16, PSTCL had claimed interest on working capital of ₹1.67 crore on the total working capital of ₹11.35 crore. The Commission approved the working capital of ₹5.38 crore and interest on working capital of ₹0.66 crore for FY 2015-16.

In the ARR Petition for FY 2016-17, PSTCL had claimed interest on working capital of ₹0.97 crore on the total working capital of ₹8.07 crore for its SLDC Business. The Commission approved the revised working capital of ₹6.85 crore and interest thereon of ₹0.82 crore for SLDC Business of PSTCL at the time of FY 2015-16.

In the True Up Petition for FY 2015-16, PSTCL has claimed ₹0.40 crore as interest @11.72% on Working Capital of ₹3.44 crore. Applying the same principle as stated above for Transmission Business, the Commission approves the total working capital requirement of ₹3.44crore and interest thereon works out to ₹0.40 crore as given in Table 3.7.

Table 3.7: Interest on Working Capital for SLDC Business: FY 2015-16

(₹crore)

Sr. No.	Particulars	Claimed by PSTCL for SLDC	Approved by the Commission
I	II	III	IV
1.	Receivables equivalent to two months fixed cost	1.74	1.74
2.	Maintenance spares @15% of O&M expenses	1.09	1.09
3.	Operation & Maintenance expenses for one month	0.61	0.61
4.	Total working capital	3.44	3.44
5.	Interest on working capital calculated on Weighted Average Rate of Interest @11.72% for FY 2014-15	0.40	0.40

The Commission approves working capital of ₹3.44 crore and interest thereon of ₹0.40 crore for SLDC Business of PSTCL for FY 2015-16.

3.9 Return on Equity

3.9.1 In ARR Petition for FY 2015-16, PSTCL had claimed RoE of ₹106.30 crore for FY 2015-16. The Commission had approved RoE of ₹93.91 crore @15.50% on the equity amount of ₹605.88 crore.

3.9.2 In ARR Petition for FY 2016-17, PSTCL has claimed a Return on Equity of ₹156.71 crore based on equity amount of ₹1101.05 crore for the Transmission Businessfor FY 2015-16 against which the Commission had approved RoE of ₹93.91 crore on equity ₹605.88 crore.

3.9.3 In the True Up Petition for FY 2015-16, PSTCL has claimed RoE of ₹93.91 crore for FY 2015-16 as detailed in Table 3.8.

Table 3.8: Return on Equity for FY 2015-16 as claimed by PSTCL

(₹crore)

Sr. No.	Particulars	PSTCL
1.	Equity at the opening of FY 2015-16	605.88
2.	Internal accruals/ free reserves reckoned as paid up equity	0.00
3.	Pre-Tax % RoE	15.50%
4.	**RoE**	**93.91**

In accordance with the PSERC Tariff Regulations, the Commission allows RoE of ₹93.91 crore @15.50% on the equity of ₹605.88 crore.

The Commission, thus, approves RoE of ₹93.91 crore to PSTCL for FY 2015-16.

3.10 ULDC Charges

3.10.1 In the ARR Petition for FY 2015-16, PSTCL claimed ULDC Charges of ₹9.00 crore for FY 2015-16 for its SLDC Business and the same were approved. In the ARR Petition for FY 2016-17, PSTCL claimed ₹17.50 crore towards ULDC charges for FY 2015-16 which were allowed by the Commissionat the time of Review.

3.10.2 In the True Up Petition for FY 2015-16, PSTCL has claimed ₹11.76 crore on account of ULDC charges for its SLDC Business based on Audited Annual Accounts for FY 2015-16. **Accordingly, the Commission approves ULDC charges of ₹11.76 crore to PSTCL for its SLDC Business for FY 2015-16.**

3.11 Non-Tariff Income

3.11.1 In the ARR Petition for FY 2015-16, PSTCL had projected ₹5.00 crore of Non-Tariff Income for its Transmission Business and ₹1.50 crore for SLDC Business for FY

2015-16 against which the Commission approved the non-tariff Income of ₹19.16 crore for Transmission Business and ₹4.90 crore for its SLDC Business for FY 2015-16.

3.11.2 In the ARR Petition for FY 2016-17, PSTCL claimed ₹2.10 crore on account of Non-Tariff Income for Transmission Business and ₹0.24 crore for SLDC Business against which the Commission had approved the revised amount of ₹41.05 crore for Transmission Business and ₹6.72 crore for SLDC Business at the time of Review of FY 2015-16.

3.11.3 In the True Up Petition for FY 2015-16, PSTCL has claimed ₹74.50 crore (₹64.63 crore for Transmission Business and ₹9.87 crore for SLDC Business) on account of Non-Tariff Income based on Audited Annual Accounts for FY 2015-16 including income from Open Access customers as Transmission charges and operating charges. **Accordingly, the Commission approves ₹64.63 crore for Transmission Business and ₹9.87 crore for SLDC Business as Non-Tariff Income for FY 2015-16.**

3.12 Prior Period Expenses

3.12.1 In the True Up Petition for FY 2015-16, PSTCL has submitted ₹13.96 crore as prior period items based on Audited Annual Accounts for FY 2015-16. PSTCL has merged the prior period expenses under concerned heads i.e. ₹9.20 crore under Depreciation and ₹4.76 crore under R&M expenses.

3.12.2 With respect to Prior Period Depreciation amounting to ₹9.20 crore claimed by PSTCL, the Commission is of the view that depreciation has been allowed on the sub-head wise assets and also disallowed the depreciation provided in excess of 90% of the original cost of assets during the previous year. As such, the Commission finds no merit in the claim of PSTCL for additional depreciation as Prior Period Expenses and no amount is allowed on this account.

3.12.3 As regards R&M expenses of ₹4.76 crore, the Commission is of the view that R&M expenses are allowed on actual basis which is less than normative. Thus, the Commission allows ₹4.76 crore as R&M expenses for the FY 2015-16.

Accordingly, the Commission allows ₹4.76 crore as Prior period expenses for Transmission Business as claimed by PSTCL for FY 2015-16.

3.13 Annual Revenue Requirement

The summary of the Annual Revenue Requirement for Transmission Business and SLDC Business of PSTCL for FY 2015-16 is shown in Table 3.9 and Table 3.10.

Table 3.9: Annual Revenue Requirement for Transmission Business for FY 2015-16

(₹crore)

Sr. No.	Particulars	For Transmission Business				
		Approved in Tariff Order for FY 2015-16	Estimates for FY 2015-16 (RE)	Approved by the Commission in the review of FY 2015-16	Claimed by PSTCL in ARR based on Audited Annual Accounts	Final approved by the Commission
I	II	III	IV	V	VI	VII
1.	Employee Cost	337.79	378.00	343.98	397.53	371.78
2.	R&M expenses	57.98	41.39	46.75	33.62	33.62
3.	Administration and General (A&G) expenses	26.77	21.96	21.49	15.90	15.90
4.	Depreciation	223.01	283.42	188.96	245.92	245.92
5.	Interest charges	303.60	426.69	420.38	413.37	394.45
6.	Interest on Working Capital	32.58	38.51	32.90	36.56	34.25
7.	Return on Equity	93.91	156.71	93.91	93.91	93.91
8.	Provision for Bad Debts and other Debits	-	-	-	-	-
9.	ULDC Charges	-	-	-	-	-
10.	Prior Period expenses	-	-	-	13.96	4.76
11.	Tax on Income	-	-	-	-	-
12.	Unrecovered amount of carrying cost from GoP	-	-	-	-	-
13.	**Annual Revenue Requirement**	**1075.64**	**1346.68**	**1148.37**	**1250.77**	**1194.59**
14.	Less: Non tariff Income	19.16	23.10	41.05	64.63	64.63
15.	**Net Revenue Requirement**	**1056.48**	**1323.58**	**1107.32**	**1186.14**	**1129.96**
16.	**Incentive**	-	-	-	23.54	22.40
17.	**Gross ARR**	**1056.48**	**1323.58**	**1107.32**	**1209.68**	**1152.36**

Table 3.10: Annual Revenue Requirement for SLDC for FY 2015-16

(₹crore)

Sr. No.	Particulars	For SLDC Business				
		Approved in T.O. for FY 2015-16	Estimates for FY 2015-16 (RE)	Approved by the Commission in the review for FY 2015-16	Claimed by PSTCL in ARR based on Audited Annual Accounts	Final approved by the Commission
I	II	III	IV	V	VI	VII
1.	Employee Cost	4.08	6.4	6.78	6.44	6.44
2.	R&M expenses	4.55	2.97	3.98	0.18	0.18
3.	Administration and General (A&G)expenses	1.31	3.27	1.15	0.65	0.65
4.	Depreciation	1.60	0.61	0.42	0.52	0.52
5.	Interest charges	2.09	0.47	0.47	0.34	0.34
6.	Interest on Working Capital	0.66	0.97	0.82	0.40	0.40
7.	Return on Equity	-	-	-	-	-
8.	Provision for Bad Debts and other Debits	-	-	-	-	-
9.	ULDC Charges	9.00	17.50	17.50	11.76	11.76
10.	Prior Period expenses	-	-	-	-	-
11.	**Annual Revenue Requirement**	**23.29**	**32.18**	**31.12**	**20.29**	**20.29**
12.	Less: Non-Tariff Income	4.90	1.46	6.72	9.87	9.87
13.	**Net Revenue Requirement**	**18.39**	**30.72**	**24.40**	**10.42**	**10.42**

The summary of the Annual Revenue Requirement of PSTCL as a whole for FY 2015-16 is shown in Table 3.11.

Table 3.11: Annual Revenue Requirement for PSTCL for FY 2015-16

(₹crore)

Sr. No.	Particulars	For PSTCL				
		Approved in Tariff Order for FY 2015-16	Projected by PSTCL in RE for FY 2015-16	Approved in Review for FY 2015-16	Claimed by PSTCL in ARR based on Audited Annual Accounts	Final Approved by the Commission FY 2015-16
I	II	III	IV	V	VI	VII
1.	Employee Cost	341.87	384.4	350.76	403.97	378.22
2.	R&M expenses	62.53	44.36	50.73	33.80	33.80
3.	A&G expenses	28.08	25.23	22.64	16.56	16.55
4.	Depreciation	224.61	284.03	189.38	246.44	246.44
5.	Interest charges	305.69	427.16	420.85	413.70	394.79
6.	Interest on working capital	33.24	39.48	33.72	36.96	34.65
7.	Return on Equity	93.91	156.71	93.91	93.91	93.91
8.	Provision for Bad Debts and other Debits	-	-	-	-	-
9.	ULDC Charges	9.00	17.50	17.50	11.76	11.76
10.	Prior Period Expenses	-	-	-	13.96	4.76
11.	Income Tax	-	-	-	-	-
12	Unrecovered amount of carrying cost from GoP	-	-	-	-	-
13.	**Annual Revenue Requirement**	**1098.93**	**1378.86**	**1179.49**	**1271.06**	**1214.88**
14.	Less: Non tariffincome	24.06	24.56	47.77	74.5	74.50
15.	**Total Revenue Requirement**	**1074.87**	**1354.30**	**1131.72**	**1196.56**	**1140.38**
16.	Incentive for Higher Transmission System Availability	-	-	-	23.54	22.40
17.	**Net Revenue Requirement**	**1074.87**	**1354.30**	**1131.72**	**1220.10**	**1162.78**
18.	**Revenue from Tariff**				**967.62**	**967.62**
19.	**Gap(-)/ Surplus(+) for the year**				**(-)252.48**	**(-)195.16**

The Revenue from Tariff of ₹1074.87 crore which was approved by the Commission in its Tariff Oder of FY 2015-16 dated 5th May, 2015 at the time of projection, has been re-determined at ₹1131.72 crore at the time of review. Thus, the carrying cost on revenue Gap of ₹56.85 (1131.72-1074.87) crore has already allowed in Tariff Order FY 2016-17.

The Net ARR after truing up exercise for FY 2015-16 is determined as ₹1162.78 crore and the same is carried forward in True up of PSPCL for FY 2015-16 as Transmission Charges payable. After considering the revenue gap of ₹56.85 crore already accounted for, the net gapworks out to ₹138.31 (195.16-56.85) crore for FY 2015-16 which has been taken into account for calculating the carrying cost at Para 4.14 of this Tariff Order.

Recoverable amount of ₹195.16 crore for the FY 2015-16 is also being added in the total amount recoverable for FY 2016-17 in Para 4.15 of this Order.

Chapter 4
Review for FY 2016-17

4.1 Background

The Commission issued the Tariff Order for Transmission Business and SLDC Business of PSTCL for FY 2016-17 on 27.07.2016. PSTCL has now submitted petition for determination of ARR and Transmission charges & SLDC charges for MYT Control Period from FY 2017-18 to FY 2019-20 for its Transmission Business and SLDC Business, along with Review for FY 2016-17. PSTCL has submitted that it has computed the revised estimates of ARR for FY 2016-17 based on the actual data of first half and projections for remaining half of FY 2016-17. The Petitioner has projected the expenses for various heads for FY 2016-17on the basis of past trends, regulatory norms and activities that are planned and proposed to be undertaken during the remaining period of FY 2016-17.

The Commission has analyzed each of the components of ARR for FY 2016-17(RE) in the following sections of this chapter.

4.2 Transmission System Capacity

PSTCL had submitted that, the net transmission capacity of the system for FY 2016-17 was projected as 12730 MW but the Commission in its Tariff Order for FY 2016-17 had approved transmission capacity of 11537.30 MW. PSTCL has now submitted that based on the actual transmission capacity of Punjab along with the proposed capacity addition plan, the estimated Gross Transmission Capacity as on 31.03.2017 would be 13176.84 MW.

4.3 Transmission System Availability

4.3.1 PSTCL has submitted that it has maintained the Transmission System Availability well above the normative annual transmission availability factor upto September, 2016. The average transmission system availability from April to September, 2016 was 99.95% as shown in Table 4.1.

Table 4.1: Transmission System Availability of PSTCL for FY 2016-17 Upto September, 2016

Sr. No.	Month	Availability (%)
I	II	III
1.	Apr-16	99.97
2.	May-16	99.93
3.	Jun-16	99.94
4.	Jul-16	99.97
5.	Aug-16	99.95
6.	Sep-16	99.93

The Commission has taken note of the availability of PSTCL transmission system.

4.4 Transmission Losses

PSTCL had projected the transmission loss at 4.0% for FY 2016-17 in its ARR for the same year. Since PSTCL had not completed the intra-state boundary metering, the Commission retained the transmission loss at 2.5% for FY 2016-17, and at the same time ordered that the Commission would revisit the transmission loss in the review/true up for FY 2016-17, after the boundary meters are provided and energy audit is conducted.

PSTCL in the ARR Petition has submitted that at present, the data has been collected for calculation of transmission losses of August, 2016 through remote connectivity, CMRI & manual reports. Further, PSTCL vide its letter no. 415 dated 02.02.2017, while submitting the status in respect of the Commission’s directives issued in the Tariff Order for FY 2016-17,has submitted that the overall transmission losses are being worked out and reported regularly to the Commission since July, 2016. Further, PSTCL vide letter nos. 13 dated 02.02.2017, 650 dated 28.02.017, 51 dated 21.03.2017 and 82 dated 28.04.2017 has submitted the transmission loss figures for December, 2016, January, February and March, 2017 respectively. The loss figures submitted by PSTCL are as under:

Sr. No.	Month	Overall Transmission Losses (%)
1	July, 2016	3.57
2	August, 2016	2.76
3	September, 2016	4.09
4	October, 2016	4.16
5	November, 2016	4.58
6	December, 2016	7.09
7	January, 2017	6.03
8	February, 2017	4.68
9	March, 2017	4.52

PSTCL has further submitted that these figures for overall transmission losses of PSTCL have been assessed by considering the net-energy inter-exchanged at boundary points of PSTCL. The data accounted for calculations has been collected through remote connectivity, CMRI, manual reports and data substitution from other sources.

The Commission notes that there is huge variation in the monthly transmission loss figures submitted by PSTCL from July, 2016 to March, 2017, which may be due to non-stabilization of data and it may take more time to stabilize. As such, the Commission retains the transmission losses at 2.50% as approved in the Tariff Order for FY 2016-17. This will be re-visited during true up of FY 2016-17.

4.5 Employee Cost

4.5.1 In the ARR Petition for FY 2016-17, the PSTCL had projected employee cost of ₹399.47 crore for Transmission Business and ₹6.73 crore for SLDC Business against which the Commission had approved ₹361.48 crore for Transmission Business and ₹7.26 crore for SLDC Business in the Tariff Order for FY 2016-17.

4.5.2 PSTCL has now revised the claim of employee cost to ₹468.91 crore (net of capitalization of ₹46.59 crore) including Terminal Benefits of ₹249.58 crore for Transmission Business, ₹212.25 crore as other employee cost for Transmission Business & ₹7.25 crore for its SLDC Business and ₹0.14 crore as arrears of wages for Transmission Business for FY 2016-17.

4.5.3 As per the provisions of Regulation 28 of PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, terminal benefits are allowed on actual basis.

4.5.4 As per Transfer Scheme notified by Govt. of Punjab the Terminal Benefits will be shared between PSPCL and PSTCL in the ratio of 88.64% and 11.36%. As PSTCL vide its letter no. 2995/FA/APR-1/2017-18 dated 24.08.2017 has supplied the provisional Accounts for FY 2016-17 and terminal benefits have been booked at ₹253.44 crore. Accordingly, the terminal benefits are being taken as ₹253.44 Crore. This will be re-examined at the time of true up of FY 2016-17 based on the Audited Annual Accounts.

The Commission therefore approves terminal benefits of ₹253.44 crore for PSTCL for FY 2016-17.

4.5.5 As per amendment in Regulation 28 of PSERC Tariff Regulations, 2005, inflation factor to be used for indexing the ‘Other Employee Cost’ will be combination of the

Consumer Price Index (CPI) and Wholesale Price Index (WPI) of n^{th} year and shall be calculated as 0.50*CPIn+0.50*WPIn.

4.5.6 The 'Other Employee Cost' in the true up for FY 2011-12 were approved at ₹92.20 crore for Transmission Business & ₹5.72 crore for SLDC Business in Tariff Order FY 2014-15. WPI of 100 for FY 2011-12 has increased to 111.60 for FY 2016-17, thereby accounting for 11.60% increase in WPI. Consumer Price Index (CPI) increase is calculated @41.62% (index of base year 2011-12 increased from 194.83 to 275.92 in FY 2016-17. The combination of 0.50 of WPI+0.50 of CPI increase will be an increase of 26.61% [(11.60+41.62)/2] which is applicable for whole of the FY 2016-17.

4.5.7 As such, 'other employee cost' of ₹92.20 crore for Transmission Business and ₹5.72 crore for SLDC Business of base year 2011-12 will be adjusted/increased with 26.61% increase in CPI and WPI for full year of FY 2016-17. Accordingly, 'Other Employee Cost' works out to ₹116.73 ((92.20*126.61)/100) crore for Transmission Business and ₹7.24 ((5.72*126.61)/100) crore for SLDC Business. PSTCL also claimed Arrears of wages of ₹0.14 crore and the same is allowed for Transmission Business of PSTCL for FY 2016-17.

The total employee cost works out to ₹370.31 (116.73+253.44+0.14) crore for Transmission Business and ₹7.24 crore for SLDC Business for FY 2016-17.

As per the Provisional Accounts of FY 2016-17, the total employee cost including terminal benefits is of ₹438.12 crore.

The Commission therefore, approves employee cost as ₹370.31 crore for Transmission Business and ₹7.24 crore for SLDC Business in the review of ARR for FY 2016-17.

4.6 Repair and Maintenance (R&M) Expenses

4.6.1 In the ARR Petition of FY 2016-17, PSTCL had projected R&M expenses of ₹45.76 crore for its Transmission Business against which the Commission had approved ₹47.28 crore for FY 2016-17. Similarly, PSTCL had projected ₹5.96 crore as R&M expenses for SLDC Business against which Commission had approved ₹4.54 crore for FY 2016-17.

4.6.2 In the ARR for MYT Control Period from FY 2017-18 to FY 2019-20, PSTCL has revised claim of R&M expenses to ₹49.11 crore for FY 2016-17 which includes R&M expenses of ₹2.34 crore for assets added during FY 2016-17 for Transmission Business. For SLDC Business, PSTCL has revised claim of R&M expenses to

₹10.05 crore which includes ₹4.18 crore as R&M expenses for assets added during FY 2016-17.

4.6.3 Regulation 28 of the PSERC Tariff Regulations, 2005 amended on17.09.2012 provides for adjusting base O&M expenses approved by the Commission for FY 2011-12 in proportion to increase in Whole Sale Price Index (all Commodities) to determine O&M expenses for subsequent year. R&M expenses of ₹25.92 crore on Gross Fixed Assets of ₹5265.17 crore were approved for Transmission Business and ₹1.93 crore on ₹5.50 crore of Gross Fixed Assets for SLDC Business for FY 2011-12.

4.6.4 The Gross Fixed Assets as on 01.04.2016 is of ₹8385.09 crore for Transmission Business and ₹14.78 crore for SLDC Business. Further, as per Provisional Accounts of PSTCL, during FY 2016-17 there has been an asset additions of ₹496.93 crore and ₹3.40 crore for Transmission Business and SLDC Business respectively. The base R&M expenses for FY 2016-17 on the Gross Fixed Assets of ₹8385.09 crore work out to ₹41.28 ((25.92/5265.17)*8385.09) crore for Transmission Business. After applying the available WPI increase of 11.60%, the R&M expenses work out to ₹46.07 ((41.28*111.60)/100) crore for Transmission Business. Similarly, the base R&M expenses for FY 2016-17 on the Gross Fixed Assets of ₹14.78 crore work out to ₹5.19 ((1.93/5.50)*14.78) crore for SLDC Business. After applying the available WPI increase of 11.60%, the R&M expenses work out to ₹5.79 ((5.19*111.60)/100) crore for SLDC Business.

4.6.5 The percentage of approved R&M expenses of ₹46.07 crore vis-à-vis the opening balance of Gross Fixed Assets of ₹8385.09 crore works out to 0.55% [(46.07/8385.09)*100]. The additional R&M expenses on the assets addition of ₹496.93 crore work out to ₹1.37 [(496.93/2)*0.55%] crore considering the asset addition for 6 months on an average during the year. The total R&M expenses for Transmission Business work out to ₹47.44 (46.07+1.37) crore for FY 2016-17.

4.6.6 Similarly, for SLDC Business, the percentage of approved R&M expenses of ₹5.79 crore vis-à-vis the opening balance of Gross Fixed Assets of ₹14.78 crore works out to 39.17% [(5.79/14.78)*100]. The additional R&M expenses on the assets addition of ₹3.40 crore work out to ₹0.66[(3.40/2)*39.17%] crore considering the asset addition for 6 months on an average during the year. The total R&M expenses for SLDC Business work out to ₹6.45 (5.79+0.66) crore for FY 2016-17.

4.6.7 As per Provisional Accounts of FY 2016-17, R&M expenses for FY 2016-17 are of ₹26.16 crore. Accordingly, the Commission provisionally allows R&M expenses of

₹19.71 crore for Transmission Business and ₹6.45 crore for SLDC Business. This will be re-examined at the time of true-up of FY 2016-17 based on the Audited Annual Accounts.

4.6.8 Further, although the Commission is allowing the expense as per Provisional Accounts of PSTCL, it is strange that the R&M expense has been declining year on year, even though there has been addition to the fixed assets each year. It appears that adequate measures are not being taken by the utility for maintenance of its assets.

The Commission, allows R&M expenses of ₹19.71 crore for Transmission Business and ₹6.45 crore for SLDC Business for FY 2016-17.

4.7 Administrative and General (A&G) Expenses

4.7.1 In the ARR Petition for FY 2016-17, PSTCL had projected A&G expenses at ₹24.90 crore for Transmission Business & ₹7.06 crore for SLDC Business. The Commission had approved ₹21.74 crore & ₹1.82 crore for Transmission Business & SLDC Business respectively, in the Tariff Order for FY 2016-17.

4.7.2 PSTCL has now claimed an amount of ₹22.75 crore as A&G expenses for Transmission Business and ₹2.91 crore for SLDC Business for FY 2016-17.

4.7.3 Regulation 28 of the PSERC Tariff Regulations, 2005 amended on 17.09.2012 provides for adjusting base O&M expenses approved by the Commission for FY 2011-12 in proportion to increase in Whole Sale Price Index (all commodities) to determine O&M expenses for subsequent year. A&G expenses of ₹11.59 crore on Gross Fixed Assets of ₹5265.17 crore were approved for Transmission Business and ₹0.56 crore on ₹5.50 crore of Gross Fixed Assets for SLDC Business for FY 2011-12 in the true up in Tariff Order FY 2014-15.

4.7.4 The Gross Fixed Assets as on 01.04.2016 are of ₹8385.09 crore for Transmission Business and ₹14.78 crore for SLDC Business. Further, as per Provisional Accounts of PSTCL, during FY 2016-17 there has been an asset additions of ₹496.93 crore and ₹3.40 crore for Transmission Business and SLDC Business respectively. The base A&G expenses for FY 2016-17 on the Gross Fixed Assets of ₹8385.09 crore work out to ₹18.46 [(11.59/5265.17)*8385.09] crore for Transmission Business. After applying the available WPI increase of 11.60%, the A&G expenses work out to ₹20.60 ((18.46*111.60)/100) crore for Transmission Business. Similarly, the base A&G expenses for FY 2016-17 on the Gross Fixed Assets of ₹14.78 crore work out to ₹1.50 [(0.56/5.50)*14.78] crore for SLDC Business. After applying the available

WPI increase of 11.60%, the A&G expenses work out to ₹1.67 [(1.5*111.60)/100) crore for SLDC Business.

4.7.5 The percentage of approved A&G expenses of ₹20.60 crore vis-à-vis the opening balance of Gross Fixed Assets of ₹8385.09 crore works out to 0.25% [(20.60/8385.09)*100]. The additional A&G expenses on the assets addition of ₹496.93 crore work out to ₹0.63[(496.93/2)*0.25%] crore considering the asset addition for 6 months on an average during the year. Accordingly, the A&G expenses for Transmission Business works out to be ₹21.23 (20.60+0.63) crore. PSTCL has also claimed ₹0.62 crore on account of License and ARR fee and ₹0.17 crore on account of Audit fee for FY 2016-17 which is allowed. The total A&G expenses for Transmission Business work out to ₹22.02 (21.23+0.62+0.17) crore for FY 2016-17.

4.7.6 Similarly, for SLDC Business, the percentage of approved A&G expenses of ₹1.67 crore vis-à-vis the opening balance of Gross Fixed Assets of ₹14.78 crore works out to 11.30% [(1.67/14.78)*100]. The additional A&G expenses on the assets addition of ₹3.40 crore work out to ₹0.19[(3.40/2)*11.30%] crore considering the asset addition for 6 months on an average during the year. Accordingly, the A&G expenses for SLDC Business work out to ₹1.86 (1.67+0.19) crore for FY 2016-17.

4.7.7 As per Provisional Accounts of FY 2016-17, A&G expenses are of ₹17.44 crore. Accordingly, the Commission provisionally allows A&G expenses of ₹15.58 Crore for Transmission Business and ₹1.86 Crore for SLDC Business. This will be re-examined at the time of true-up of FY 2016-17 based on the Audited Annual Accounts.

Therefore, the Commission approves A&G expenses for ₹15.58 crore for Transmission Business and ₹1.86 crore for SLDC Business for FY 2016-17.

4.8 Depreciation Charges

4.8.1 For FY 2016-17, PSTCL had claimed depreciation charges of ₹321.72 crore for Transmission Business and ₹1.46 crore for its SLDC Business on average of opening and closing GFA for FY 2016-17 against which the Commission had approved depreciation charges of ₹210.46 crore for Transmission Business and ₹0.59 crore for SLDC Business. In this Petition, PSTCL has revised its claim to ₹308.64 crore for Transmission Business and ₹1.18 crore for SLDC Business as depreciation charges for FY 2016-17.

The Gross Fixed Assets as on 01.04.2016 are to the tune of ₹5458.21 crore for Transmission business and ₹14.78 crore for SLDC business (net of land and land rights) as per Audited Annual Accounts of FY 2015-16. Closing balance of Fixed Assets is ₹5955.14 and ₹18.18 crore (net of land and land rights) for Transmission business and SLDC business respectively as on 31.03.2017 as per provisional Accounts of FY 2016-17. There is net addition to assets is Rs.496.93 crore and Rs.3.40 crore inspect of Transmission business and SLDC Business respectively.

4.8.2 As per Provisional Annual Accounts for FY 2016-17,₹264.46 crore has been booked as Depreciation charges. **Accordingly, the Commission provisionally allows depreciation charges of ₹263.28 crore for Transmission Business and ₹1.18 crore for SLDC Business. This will be re-examined at the time of true-up of FY 2016-17 based on the Audited Annual Accounts.**

4.9 Interest and Finance Charges

4.9.1 In the ARR Petition for FY 2016-17, PSTCL had projected interest charges of ₹420.52 crore (net of capitalization of ₹43.89 crore) for Transmission Business and ₹1.43 crore for SLDC Business. The Commission approved interest charges of ₹409.47 crore for Transmission Business and ₹1.43 crore for SLDC Business for FY 2016-17.

4.9.2 PSTCL has now revised its claim of Interest charges to ₹407.25 (net of capitalization of ₹59.60 crore) crore for Transmission Business and ₹1.43 crore for SLDC Business.

The interest and finance charges are discussed in the ensuing paragraphs.

4.9.3 **Investment Plan for Transmission Business**

In the ARR Petition for FY 2016-17, PSTCL had estimated capital expenditure of ₹512.98 crore against which the Commission had approved an investment plan of ₹500.00 crore for the Transmission Business of PSTCL in Tariff Order for FY 2016-17. PSTCL has revised estimate of the capital expenditure at ₹473.37 crore for FY 2016-17. The details of capital expenditure submitted by PSTCL are shown in Table 4.2.

Table 4.2: Estimates of Capital Expenditure for Transmission Business for FY 2016-17

(₹crore)

Sr. No.	Particulars	Expenditure duringFY2016-17
I	II	III
1.	400kV Transmission Works	12.50
2.	220kV & 132kV Transmission Works	415.49
3.	ERP	6.40
4.	Training	10.98
5.	Others	28.00
6.	**Grand Total**	**473.37**

**Works in progress*

The loan requirement for PSTCL works out to ₹400.87 crore out of which ₹3.23 crore relates to SLDC business as intimated by PSTCL.

4.9.4 Investment Plan for SLDC Business

In the ARR for MYT Control Period for FY 2017-18 to FY 2019-20, PSTCL proposed an investment of ₹16.30 crore for SLDC Business for FY 2016-17 as shown in Table 4.3.

Table 4.3*:* Estimates of Capital Investment for SLDC Business for FY 2016-17

(₹crore)

Sr. No.	Particulars	Projected for SLDC
I	II	III
1.	Procurement of 47 RTUs for SCADA Scheme	3.00
2.	Implementation Intrastate Boundary Metering cum Transmission Level Energy Audit Scheme in PSTCL	4.00
3.	Implementation of Islanding Scheme	0.02
4.	Intermediary SCADA, Small IPPs & SCADA/EMS	7.02
5.	**Total**	**16.30**

PSTCL has proposed capitalization of ₹21.03 crore against proposed investment of ₹16.30 crore. However, as per Provisional Accounts for FY 2016-17, the opening Capital Work in Progress as on 01.04.2016 is ₹756.88 crore and ₹4.76 crore for Transmission and SLDC Business respectively. Net asset addition during FY 2016-17 is of ₹496.93 crore in Transmission Business and ₹3.40 crore in SLDC business. Closing balance of Capital Work in Progress as on 31.03.2017 is of ₹665.86 crore and ₹0.03 crore for transmission and SLDC business respectively.

The Commission has approved the closing balance of loans(other than working capital and GPF) for FY 2015-16 of ₹3661.72 crore in Para 3.8.3 of this Tariff Order. The addition of Loan for FY 2016-17 as per the Provisional Accounts is ₹397.64 crore and ₹318.48 crore for repayment of loans for Transmission Business. Hence, the closing balance of loans as on 31.03.2017 works out to be ₹3740.88 (3661.72+397.64-318.48) crore.

PSTCL has claimed ₹439.87 crore towards interest on Loan and an addition of loans of ₹473.37 crore during FY 2016-17 for its Transmission Business in the RE for FY 2016-17. The interest allowable is worked out as detailed in Table 4.4.

Table 4.4: Interest on Loan (other than WCL& GP Fund) for Transmission Business

(₹crore)

Sr. No.	Particulars	Loan as on April 1, 2016	Receipt of loan during FY 2016-17	Repayment of loan during FY 2016-17	Loan as on March 31, 2017	Amount of Interest
I	**II**	**III**	**IV**	**V**	**VI**	**VII**
1.	As per data furnished in ARR Petition (other than WCL)	3849.06	473.37	293.88	4028.55	439.87
2.	Approved by the Commission (other than WCL)	3661.72	397.64	318.48	3740.88	413.34

The Commission thus approves the interest on loan at ₹413.34 crore for the Transmission Business of PSTCL for FY 2016-17.

PSTCL has claimed ₹1.43 crore towards interest on loan (other than WCL) for FY 2016-17 for its SLDC Business in the ARR for MYT Control Period for FY 2017-18 to FY 2019-20. The Commission has determined closing loan balance of ₹3.73 crore as on 31.03.2016 in para 3.8.8 of this Tariff Order, which is considered as opening balance of Loans for FY 2016-17. After considering loan additions of ₹3.23 crore and Nil repayment, the closing balance of loans as on 31.03.2017 works out as ₹6.96 (3.73+3.23) crore. PSTCL has claimed ₹1.43 crore towards interest on opening balance of Loans and an addition of loans of ₹16.30 crore during FY 2016-17 for its SLDC Business. The interest on long term loans is worked out as detailed in Table 4.5.

Table 4.5: Interest on Loan for SLDC (other than WCL)

(₹crore)

Sr. No.	Particulars	Loan as on April 1, 2016	Receipt of loan during FY 2016-17	Repayment of loan during FY 2016-17	Loan as on March 31, 2017	Amount of Interest
I	II	III	IV	V	VI	VII
1.	As per data furnished in ARR Petition (other than WCL)	3.73	16.30	0.00	20.03	1.43
2.	Approved by the Commission (other than WCL)	3.73	3.23	0.00	6.96	0.64

The Commission approves the interest on loans at ₹0.64 crore for FY 2016-17 for the SLDC Business of PSTCL.

4.9.5 **Guarantee Charges**

PSTCL has claimed ₹14.00 crore as Guarantee Charges payable to Govt. of Punjab for its Transmission Business which is allowed. As PSTCL vide its letter No. 2995/FA/APR-1/2017-18 dated 24.08.2017 has supplied provisional Accounts for FY 2016-17. In which ₹10.00 crore has been booked as guarantee charges. Guarantee Charges payable to Govt. of Punjab for its Transmission Business which is allowed.

4.9.6 **Finance Charges**

PSTCL has claimed finance charges of₹1.37 crore under Transmission Business on closing loan balance of ₹4028.55 crore. As PSTCL vide its letter No. 2995/FA/APR-1/2017-18 dated 24.08.2017 has supplied provisional Accounts for FY 2016-17. In which ₹0.16 crore has been booked as finance charges.

The Commission approves finance charges of 0.16 crore for transmission business.

4.9.7 **Interest on GP Fund**

PSTCL has claimed an interest of ₹11.60 crore on GP fund of ₹153.69 (opening balance) crore. As per Provisional Accounts of PSTCL, ₹11.56 crore has been booked as interest on GP fund. Thus, the interest of ₹11.56 crore on GP Fund, being statutory payment, is allowed as claimed by PSTCL for FY 2016-17.This will be re-examined at the time of true-up of FY 2016-17 based on the audited Annual Accounts.

4.9.8 **Capitalization of Interest Charges**

PSTCL has claimed ₹59.60 crore as capitalization of interest for the FY 2016-17 for the Transmission Business of PSTCL and nil capitalization of interest charges for its SLDC Business. As per PSTCL provisional Accounts for FY 2016-17 capitalization of interest has been booked as ₹61.84 crore. The Commission, accordingly, approves capitalization of interest of ₹61.84 crore for the Transmission Business of PSTCL and nil capitalization of interest charges for its SLDC Business.

The Commission approves interest charges for PSTCL for its Transmission Business for FY 2016-17 as shown in Table 4.6.

Table: 4.6 Interest Charges for Transmission Business

(₹crore)

Sr. No.	Particulars	Loan as on April 01, 2016	Receipt of loan during FY 2016-17	Repayment of loan	Loan as on March 31, 2017	Interest charges approved by the Commission
I	**II**	**III**	**IV**	**V**	**VI**	**VII**
1.	Interest on institutional loans	3661.72	397.64	318.48	3740.88	413.34
2.	Finance Charges					0.16
3.	Guarantee Charges					10.00
4.	Interest on GP Funds					11.56
5.	Total (1+2+3)					435.06
6.	Less: Capitalization					61.84
7.	**Net Interest Charges**					**373.22**

The Commission, accordingly, approves the Interest and Finance Charges of ₹373.22 crore for the Transmission Business of PSTCL for FY 2016-17.

Similarly, the approved interest charges for SLDC Business of PSTCL for FY 2016-17 are shown in Table 4.7.

Table 4.7: Interest Charges for SLDC Business for FY 2016-17

(₹crore)

Sr. No.	Particulars	Loan as on April 01, 2016	Receipt of loan during FY 2016-17	Repayment of loan during FY 2016-17	Loan as on March 31, 2017	Amount of interest
I	II	III	IV	V	VI	VII
1.	Interest on institutional loans	3.73	3.23	0.00	6.96	0.64
2.	Finance Charges					-
3.	Total(1+2)	3.73	3.23	0.00	6.96	0.64
4.	Less: Capitalization					-
5.	**Net Interest Charges**					**0.64**

Accordingly, the Commission allows Interest Charges of ₹0.64 crore for the SLDC Business of PSTCL for FY 2016-17.

As PSTCL vide its letter no. 2995/FA/APR-1/2017-18 dated 24.08.2017 has supplied the Provisional Accounts for FY 2016-17and Interest Charges have been booked at ₹373.86 crore. Accordingly, the Interest Charges are being taken as ₹373.22 Crore for transmission business and ₹0.64 Crore for SLDC. This will be re-examined at the time of true up of FY 2016-17 based on the audited Annual accounts.

4.9.9 **Interest on Working Capital**

In the ARR Petition for FY 2016-17, PSTCL had claimed interest on working capital of ₹40.50 crore for Transmission Business, on normative basis, on a total working capital of ₹345.55 crore against which the Commission had approved interest charges of ₹33.99 crore on a total working capital of ₹290.01 crore for Transmission Business of PSTCL for FY 2016-17.

In the ARR for MYT Control Period for FY 2017-18 to FY 2019-20, PSTCL has claimed interest on working capital of ₹41.79 crore for transmission Business on normative basis, on a total working capital of ₹349.74 crore for FY 2016-17.

The Commission has considered the working capital as per PSERC tariff Regulations. The interest on working capital of ₹280.96 crore works out to ₹31.13 crore for FY 2016-17 by applying an interest rate of 11.08%, being the weighted average rate of interest on the loans claimed by them during the year 2016-17 as detailed in Table 4.8.

Table 4.8: Interest on Working Capital for Transmission Business of PSTCL

(₹crore)

Sr. No.	Particulars	Projected by PSTCL	Approved by the Commission
I	II	III	IV
1.	Receivables equivalent to two months	225.25	186.32
2.	Maintenance spares @15% of Operation and Maintenance (O&M) expenses	80.03	60.84
3.	Operation and Maintenance expenses for one month	44.46	33.80
4.	Working Capital Requirement	349.74	280.96
5.	Rate of Interest	11.95%	11.08%
6.	**Interest on Working Capital**	**41.79**	**31.13**

The Commission, thus, approves the Working Capital of ₹280.96 crore and interest thereon of ₹31.13 crore for the Transmission Business of PSTCL for FY 2016-17.

In the ARR Petition for FY 2016-17, PSTCL had claimed interest on working capital of ₹1.35 crore for SLDC Business on the total working capital of ₹11.29 crore. The Commission had allowed the interest on working capital as ₹0.90 crore on the working capital of ₹7.49 crore.

PSTCL has now claimed interest of ₹1.26 crore on working capital of ₹10.51 crore for FY 2016-17. Applying the above principle, the Commission has worked out the interest on working capital by applying rate interest of 12.00%, being, the weighted average rate of interest on loans for FY 2016-17 as detailed in Table 4.9.

Table 4.9: Interest on Working Capital for SLDC Business of PSTCL

(₹crore)

Sr. No.	Particulars	Projected by PSTCL	Approved by the Commission
I	II	III	IV
1.	Receivables equivalent to two months	5.79	3.80
2.	Maintenancespares@15%ofOperationandMaintenance(O&M)expenses	3.03	2.33
3.	Operation and Maintenance expenses for one month	1.68	1.30
4.	Working Capital Requirement	10.51	7.43
5.	Rate of Interest	12.00%	12.00%
6.	**Interest on working capital**	**1.26**	**0.89**

As PSTCL vide its letter no. 2995/FA/APR-1/2017-18 dated 24.08.2017 has supplied Provisional Accounts for FY 2016-17 and Interest on Working Capital have been booked at ₹32.02 crore. Accordingly, the Interest on Working Capital are being taken as ₹31.13 Crore for transmission business and ₹0.89 Crore for SLDC. This will re-examined at the time of true up of FY 2016-17.

Thus, the Commission, approves the Working Capital of ₹7.43 crore and interest thereon of ₹0.89 crore for SLDC Business of PSTCL for FY 2016-17.

4.10 Return on Equity (RoE)

In ARR Petition for FY 2016-17, PSTCL claimed RoE of ₹156.71 crore on equity of ₹1011.05 crore for FY 2016-17 against which the Commission approved RoE of ₹93.91 crore @15.50% on the equity amount of ₹605.88 crore. In the ARR for MYT Control Period for FY 2017-18 to FY 2019-20, PSTCL has submitted revised estimates of ₹93.91 crore as RoE for FY 2016-17 based on equity of ₹605.88 crore.

As stated in Para 2.9.3 of this Tariff Order, the Commission allows RoE to PSTCL on the equity amount of ₹605.88 crore @15.50% per annum.

The Commission, thus, approves RoE of ₹93.91 crore for FY 2016-17 to PSTCL for Transmission Business.

4.11 ULDC Charges

PSTCL had claimed ₹16.10 crore towards ULDC charges for FY 2016-17 in the ARR Petition for FY 2016-17 and the same were approved. In the ARR for MYT Control Period for FY 2017-18 to FY 2019-20, PSTCL has claimed ₹16.10 crore for FY 2016-17 as ULDC charges. As per Provisional Accounts for FY 2016-17 ULDC Charges are of ₹9.93 crore. Accordingly, the ULDC Charges are being taken as ₹9.93 Crore. This will be re-examined at the time of true up of FY 2016-17 based on Audited Annual Accounts.

The Commission allows ₹9.93 crore as ULDC charges for FY 2016-17.

4.12 Non-Tariff Income

4.12.1 In the ARR Petition for FY 2016-17, PSTCL had claimed receipts of ₹5.00 crore as Non-Tariff Income for Transmission Business and ₹0.00 crore for SLDC Business against which the Commission had approved ₹41.05 crore for Transmission Business and ₹6.72 crore for SLDC Business. PSTCL has now claimed Non-Tariff Income of ₹33.63 crore for transmission business and ₹5.41 crore for SLDC Business. As per provisional Accounts for FY 2016-17, Non-Tariff income is at ₹ 54.66 crore. Accordingly, the Non-Tariff income is being taken as ₹49.25 Crore for Transmission Business and ₹5.41 Crore for SLDC Business. This will be re-examined at the time of true up of FY 2016-17 based on Audited Annual Account of FY 2016-17.

Accordingly, the Commission approves Non-Tariff Income of ₹49.25 crore for the Transmission Business and ₹5.41 crore for SLDC Business of PSTCL for

FY 2016-17.

4.13 Tax on Income

In the ARR for MYT Control Period for FY 2017-18 to FY 2019-20, PSTCL has not claimed any Income Tax paid for FY 2016-17.

Therefore, no amount of income tax is allowed for FY 2016-17.

4.14 Carrying Cost on Revenue Gap

4.14.1 True up of FY 2014-15

As discussed in Para 2.14 of this Tariff Order, the Commission allows recovery of carrying cost on the revenue deficit of ₹176.36 crore @11.95% for FY 2015-16 (six months), @11.08% for FY 2016-17 (full year) and @11.95% for FY 2017-18 (six months). The total recoverable carrying cost for FY 2014-15 is worked out to the tune of ₹40.62 crore.

The carrying cost of revenue gap of ₹176.36 crore for FY 2014-15 amounting to ₹20.31 crore (₹10.54 crore for six months of FY 2015-16 + ₹9.77 crore for six months of FY 2016-17) is passed to GoP.

Therefore, the carrying cost of revenue gap of ₹176.36 crore for FY 2014-15 amounting to ₹20.31 crore (₹9.77 crore for six months of FY 2016-17 and ₹10.54 crore for six months of FY 2017-18) is recoverable by PSTCL from PSPCL.

4.14.2 True up of FY 2015-16

As discussed in Para 3.14 of this Tariff Order, the Commission allows recovery of carrying cost on the revenue deficit of ₹138.31 crore @11.08% for FY 2016-17 (six months) and @11.95% for FY 2017-18 (six months). Thus, The total allowable carrying cost for FY 2015-16 is worked out to the tune of ₹15.93 crore

4.14.3 Review of FY 2016-17

As discussed in Para 4.15 of this Tariff Order the Commission allows carrying cost on the revenue surplus of ₹10.34 crore @11.08% for FY 2016-17 (six months) and @11.95% for FY 2017-18 (six months). The total allowable carrying cost for FY 2016-17 is worked out to the tune of (-) ₹1.19 crore.

Thus, the net recoverable carrying cost of ₹35.05 (20.31+15.93-1.19) crore of FY 2014-15 , FY 2015-16 and FY 2016-17 is recoverable by PSTCL from PSPCL in FY 2017-18.

4.15 Annual Revenue Requirement

The Summary of the Annual Revenue Requirement for Transmission Business and SLDC Business of PSTCL for FY 2016-17 is shown in Table 4.10 & Table 4.11 respectively.

Table 4.10: ARR for Transmission Business of PSTCL for FY 2016-17

(₹crore)

Sr. No.	Particulars	Projected by PSTCL in the ARR for FY 2016-17	Approved by the Commission in Tariff Order for FY 2016-17	RE by PSTCL in the ARR for FY 2016-17	Now Approved by the Commission
I	II	III	IV	V	VI
1.	Employee costs	399.47	361.48	461.66	370.31
2.	R&M expenses	45.76	47.28	49.11	19.71
3.	A & G expenses	24.90	21.74	22.75	15.58
4.	Depreciation	321.72	210.46	308.64	263.28
5.	Interest charges	420.52	409.47	407.25	373.22
6.	Interest on working capital	40.50	33.99	41.79	31.13
7.	Return on Equity	156.71	93.91	93.91	93.91
8.	ULDC Charges	0.00	0.00	0.00	-
9.	Interest on Un-recovered	10.54	0.00	0.00	-
10.	**Total Revenue Requirement**	**1420.13**	**1178.33**	**1385.12**	**1167.14**
11.	Less: Non-Tariff Income	5.00	41.05	33.63	49.25
12.	**Net Revenue Requirement**	**1415.13**	**1137.28**	**1351.49**	**1117.89**

Table 4.11: ARR for SLDC Business of PSTCL for FY 2016-17

(₹crore)

Sr. No.	Particulars	Projected by PSTCL in the ARR for FY 2016-17	Approved by the Commission in Tariff Order for FY 2016-17	RE by PSTCL in the ARR for FY 2016-17	Now Approved by the Commission
I	II	III	IV	V	VI
1.	Employee costs	6.73	7.26	7.25	7.24
2.	R&M expenses	5.96	4.54	10.05	6.45
3.	A & G expenses	7.06	1.82	2.91	1.86
4.	Depreciation	1.46	0.59	1.18	1.18
5.	Interest charges	1.43	1.43	1.43	0.64
6.	Interest on working capital	1.35	0.90	1.26	0.89
7.	Return on Equity	0.00	0.00	0.00	-
8.	ULDC Charges	16.10	16.10	16.10	9.93
9.	Tax on Income	0.00	0.00	0.00	-
10.	**Total Revenue Requirement**	**40.09**	**32.64**	**40.18**	**28.19**
11.	Less: Non-Tariff Income	0.00	6.72	5.41	5.41
12.	**Net Revenue Requirement**	**40.09**	**25.92**	**34.76**	**22.78**

The summary of the Annual Revenue Requirement of PSTCL as a whole for FY 2016-17 is shown in Table 4.12.

Table 4.12: Annual Revenue Requirement for PSTCL in respect of Transmission Business and SLDC Business for FY 2016-17

(₹crore)

Sr. No.	Particulars	Projected by PSTCL in the ARR for FY 2016-17	Approved by the Commission in Tariff Order for FY 2016-17	RE by PSTCL in the ARR for FY 2016-17	Now Approved by the Commission
I	II	III	IV	V	VI
1.	Employee costs	406.20	368.74	468.91	377.55
2.	R&M expenses	51.72	51.82	59.16	26.16
3.	A & G expenses	31.96	23.56	25.65	17.44
4.	Depreciation	323.18	211.05	309.82	264.46
5.	Interest charges	421.94	410.90	408.68	373.86
6.	Interest on working capital	41.85	34.89	43.05	32.02
7.	Return on Equity	156.71	93.91	93.91	93.91
8.	ULDC Charges	16.10	16.10	16.10	9.93
9.	Interest on Un-recovered amount of GoP	10.54	0.00	0.00	-
10.	Tax on Income	0.00	0.00	0.00	-
11.	**Annual Revenue Requirement**	**1460.22**	**1210.97**	**1425.30**	**1195.33**
12.	Less: Non-Tariff Income	5.00	47.77	39.04	54.66
13.	**Total Revenue Requirement**	**1455.22**	**1163.20**	**1386.26**	**1140.67**
14.	**Revenue from Tariff**				**1151.01**
15.	**Gap {Deficit (-)/ Surplus (+)} for the year**				**(+)10.34**

The Net Revenue Requirement of ₹1151.01 crore (recoverable amount determined as ₹1047.02 crore in Commission's Order in Review Petition no. 4 of 2016) which was approved by the Commission in its Tariff order for FY 2016-17 dated 27.07.2016 at the time of projections, has been re-determined at ₹1140.67 crore, after review for FY 2016-17. The surplus of ₹10.34 (1151.01-1140.67) crore is considered for calculating the carrying cost at para 4.14.3 of this order. Also, the Commission has determined carrying cost of ₹35.05 (20.31+15.93-1.19) crore of FY 2014-15, FY 2015-16 and FY 2016-17 is recoverable by PSTCL from PSPCL in FY 2017-18. Accordingly, Annual Revenue Requirement for FY 2016-17 works out to ₹1175.72 crore and the same is carried forward in review of PSPCL for FY 2016-17 as Transmission Charges payable.

Total recoverable amount during FY 2016-17 will be ₹1502.53 (₹1175.72 crore for FY 2016-17, ₹138.31 crore for FY 2015-16 and ₹188.50 crore for FY 2014-15) crore.

Chapter 5

Annual Revenue Requirement for MYT Control Period from FY 2017-18 to FY 2019-20

5.1 Background

PSTCL has projected the Annual Revenue Requirement (ARR) for MYT Control Period from FY 2017-18 to FY 2019-20, separately for its Transmission business and SLDC business. The Commission has analyzed the projections for each item and determined the ARR for MYT Control Period from FY 2017-18 to FY 2019-20, separately, for Transmission business and SLDC business of PSTCL in this chapter.

5.2 Transmission System Capacity

PSTCL has projected the Transmission Capacity (net) of the system for FY 2017-18, FY 2018-19 and FY 2019-20 as 13647.63 MW, 14660.21 MW and 15010.87 MW respectively. The Transmission System capacity projected by PSTCL in the ARR includes generating stations connected with Sub-Transmission / Distribution System of PSPCL. The Commission has determined the Transmission capacity (net) of PSTCL system from the data submitted by PSTCL as 12278.96 MW, 12500.78 MW and 12608.38 MW for FY 2017-18, FY 2018-19 and FY 2019-20 respectively, which the Commission approves.

5.3 Transmission System Availability

PSTCL has submitted that Regulation, 55 of PSERC (Terms and Conditions of Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2014 (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. PSTCL has further submitted that the actual transmission availability in past years is higher than 99%. PSTCL has been investing considerable amounts on new transmission network, strengthening and augmentation of existing transmission network, system reliability and efficiency improvement etc., which has been submitted as part of the Capital Investment Plan for the Control Period. PSTCL will achieve Normative Annual Transmission Availability Factor as specified in PSERC MYT Regulations, 2014, during the Control Period.

The Commission has taken note of the submissions of PSTCL and shall consider its actual Transmission System Availability for FY 2017-18, FY 2018-19 and FY 2019-20 for incentive, if permissible as per PSERC MYT Regulations, 2014 at the time of true up for the respective years.

5.4 Transmission Losses

PSTCL, in the ARR has submitted that the metering arrangement has been made under Intra-State Boundary Metering cum Transmission Level Energy Scheme. The data has been collected for calculation of transmission losses of August, 2016 through remote connectivity, CMRI and manual reports. The tentative losses are 2.76%, which are being re-verified and further certain anomalies are being resolved. PSPCL has further submitted that the data from all boundary meters shall be available through remote connectivity in the CEC after rectifying all the field related problem by November, 2016. PSPCL has further submitted that the transmission loss in transmission network depends upon various factors, such as shifting of load centres, energy injection & drawal into the network and the extent of inherent technical losses pertaining to the transmission equipments in use. PSTCL continuously strives to reduce the technical losses in the system. PSTCL is regularly monitoring the loading of transmission lines and power transformers/ICTs and making all possible efforts to optimize the loading of this equipment to reduce the technical losses in the system.

Further, for the trajectory of transmission losses during the Control Period, PSTCL has submitted that no past data of transmission losses is available and also the data for actual losses for whole year is also not yet available. As such, it would be difficult to establish baseline for transmission losses. PSTCL has submitted that transmission losses for the other States in the country are in the range of 2.48% to 4.99% and the loss of PSTCL transmission system is lower. Further, reduction of transmission losses would be much more difficult and requires significant additional capital investment. PSTCL has projected transmission losses for FY 2017-18, FY 2018-19 and FY 2019-20 at the level of 2.80%, 2.60% and 2.50% respectively.

PSTCL has intimated monthly transmission loss from July, 2016 to January, 2017 as under:

Sr. No.	Month	Overall Transmission Losses (%)
1	July, 2016	3.57
2	August, 2016	2.76
3	September, 2016	4.09
4	October, 2016	4.16
5	November, 2016	4.58
6	December, 2016	7.09
7	January, 2017	6.03
8	February, 2017	4.68
9	March, 2017	4.52

The Commission observes that there is wide variation in the monthly transmission loss figures submitted by PSTCL from July, 2016 to March, 2017, which may be due to non-stabilization of data. In para 4.4 of the Tariff Order, the Commission has retained the Transmission losses at 2.5% for FY 2016-17. Further, the Commission has noted that PSTCL has completed Intra-State Boundary Metering cum Transmission Level Energy Scheme. However, the data from the same is yet to be stabilized. As such, the Commission approves the Transmission losses at 2.5%, 2.40% and 2.30% for FY 2017-18, FY 2018-19 and FY 2019-20 respectively. The Commission would revisit the Transmission losses during review/true up for FY 2017-18, FY 2018-19 and FY 2019-20, on the basis of stabilized transmission loss data for full year.

5.5 Employee Cost

5.5.1 PSTCL has claimed employee cost for Transmission Business and SLDC Business for FY2017-18, FY 2018-19 and FY 2019-20 as per details in Table 5.1.

Table 5.1: Employee Expense projected by PSTCL for the Control Period FY 2017-18 to FY 2019-20

(₹crore)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
(I)	**Transmission**			
1.	Salaries &other employee cost	227.64	240.98	255.07
2.	Terminal Benefits	302.79	315.25	332.53
3.	Total	530.43	556.23	587.60
(II)	**SLDC**			
4.	Salaries &other employee cost	7.59	7.94	8.32
5.	Terminal Benefits	0.00	0.00	0.00
6.	Total	7.59	7.94	8.32
7.	**Grand Total**	**538.02**	**564.17**	**595.92**

5.5.2 **Petitioner's Submission**

a) PSTCL has claimed Employee expenses consisting Terminal benefits and other employee cost. PSTCL has submitted that the Regulations, as specified in the PSERC MYT Regulations, 2014, have been considered in the petition.

b) Hon'ble APTEL in Judgment dated September 11, 2014 in Appeal No. 174 of 2012 held that when the utility needs to comply with the lawful agreements entered into with the employees the same cannot be avoided and wriggled out. Further, Hon'ble APTEL in Judgment dated March 30, 2015 in Review Petition No. 6 of 2015 also held that the Employee cost shall be allowed on actual basis. The PSTCL prays the Hon'ble Commission to approve the projected Employee cost as claimed in Table 5.1.

c) PSTCL has not considered the impact of wage revision of 6th Pay Commission during the Control Period since these expenses are allowed on actual basis as per Regulation 26 of PSERC MYT Regulations, 2014.

d) PSTCL submitted that it had claimed the impact of progressive funding in ARR & Tariff Petition for FY 2014-15. Since the Commission disallowed the impact of progressive funding and the matter is pending before the Hon'ble Supreme Court, PSTCL has not considered the impact of progressive funding for the Control Period. However, PSTCL reserves the right to claim the impact of progressive funding subject to decision of Hon'ble Supreme Court.

e) PSTCL submitted 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.

f) PSTCL has created liability for meeting terminal liabilities of gratuity and leave encashment in respect of employees recruited by PSTCL under New Pension Scheme (NPS).

g) PSTCL vide its memo no. 829/FA/MYT-1 dated 21.03.2017 has intimated regarding the Interim Relief granted by Govt. of Punjab vide notification no. 6/1/1995-1FPI/86 dated 16.02.2017 @5% of basic pay/pension to the employees/pensioners w.e.f. 01.01.2017. Consequent to the notification of GoP, PSTCL has claimed Interim Relief of ₹3.26 (₹3.16 for transmission + ₹0.10 for SLDC business) crore for review of FY 2016-17 and ₹42.87 (41.70 crore for transmission + 1.17 crore for SLDC business) crore for determination of ARR for MYT Control Period from FY 2017-18 to FY 2019-20.

Commission's Analysis:

5.5.3 The Employee expenses, R&M expenses and A&G expenses are commonly considered as O&M expenses. Regulation 26 of Punjab State Electricity Regulatory Commission MYT Regulations, 2014 as amended on 3rd February, 2016, explains the methodology for computing the O&M expenses as follows:

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

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,

- *R&Mn – Repair and Maintenance Costs of the Applicant for the nth year;*
- *EMPn – Employee Cost of the Applicant for the n th year;*
- *A&Gn – Administrative and General Costs of the Applicant for the n th year;*

The above components shall be computed in the manner specified below:

(i) R&Mn + A&Gn = K*GFA*(WPIn/WPIn-1)

Where,

- ***"K"** is a constant (expressed in %) governing the relationship between R&M and A&G expenses 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*
- ***WPIn** means the average rate (on monthly basis) of Wholesale Price Index (all commodities) over the year for the nth year.*

(ii) EMPn = (EMPn-1)*(INDEXn/INDEXn-1)

- ***INDEXn-** Inflation factor to be used for indexing the Employee Cost.*
- *This will be a combination of the Consumer Price Index (CPI) and 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 (all commodities) over the year for the nth year.*

Note 1: *…….*

Note 2: *For the Purpose of estimation, the same WPIn and CPIn values shall be used for all used for all years of the Control Period. However, the Commission will consider the actual values of the WPIn and CPIn at the end of each year during the Annual Performance Review exercise and true up the employee cost on account of this variation. Further, the Commission will consider the actual values of the WPIn at the end of each year during Annual Performance Review exercise and true up the R&M and A&G Expenses on account of this variation.*

Note 3: *…….*

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: *……..*

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

Note 7&8: *……*

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: *……****"***

5.5.4 The Commission has not allowed the Interim Relief claimed by PSTCL as the impact of interim relief will be considered by the Commission at the time of True up of the respective Financial Years based on the Audited Annual Accounts.

5.5.5 The Commission has considered actual amount of employee cost of FY 2015-16 from the Audited Annual Accounts of FY 2015-16 as base for deriving the allowable amount of employee cost for the Control Period, however, the employee cost of Control Period will be re-determined after the True up of FY 2016-17, based on the Audited Annual Accounts.

5.5.6 The WPI and CPI Index for the MYT Control Period are not available, therefore the percentage increase in WPI and CPI index respectively of FY 2016-17 over FY 2015-16 have been considered for each year for Control Period.

5.5.7 The terminal benefits are required to be apportioned in the ratio of 11.36% and 88.64% between PSTCL and PSPCL as per Transfer Scheme approved by GoP vide notification dated 24.12.2012. The terminal benefits of ₹2191.75 crore, ₹2275.69 crore & ₹2396.27 crore have been approved for FY 2017-18, FY 2018-19 &FY 2019-20 respectively for PSPCL (Para 5.10.5) in PSPCL Tariff Order for MYT Control Period from FY2017-18 to FY 2019-20 being as 88.64% share as per transfer scheme. As such 11.36% share of PSTCL works out to ₹280.89 crore, ₹291.65 crore & ₹307.10 crore for FY 2017-18, 2018-19 & 2019-20 respectively.

Therefore, the Commission approves terminal benefits of ₹280.89 crore for FY 2017-18, ₹291.65 crore for FY 2018-19 & ₹307.10 crore for FY 2019-20 for PSTCL against the claim of ₹302.79 crore for FY 2017-18, ₹315.24 crore for FY 2018-19 ₹332.53 crore for FY 2019-20.

5.5.8 PSERC Tariff Regulations have been amended which provide that inflation factor to be used for indexing the Employee Cost will be combination of the Consumer Price Index (CPI) and Wholesale Price Index (WPI) of nth year and shall be calculated as 0.50*CPIn+0.50*WPIn. The WPI and CPI index for FY 2015-16 are109.70 and 265.00 respectively and the WPI and CPI index for FY 2016-17 are111.60 and 275.92 respectively. Thus, there was increase in WPI index of 1.73% [((111.60-109.70)/109.70)*100] and increase in CPI index of 4.12% [((275.92-265)/265)*100] in FY 2016-17 over FY 2015-16. As discussed above, the 'other employee cost' will be combination of the Consumer Price Index (CPI) and Wholesale Price Index (WPI) of n^{th} year and shall be calculated as 0.50*CPIn+0.50*WPIn. Therefore, increase of 2.93% {(1.73%+4.12%)/2} in 'other employee cost' is being allowed over the 'other employee cost' approved for the base year of 2015-16.

5.5.9 For the purpose of estimation, the same WPIn and CPIn values have be used for all years of Control Period as per Note 2 to Regulation 26 of PSERC MYT Regulations, 2014 (amended on 3rd February, 2016).

5.5.10 'Other Employee Cost' approved for FY 2015-16 is ₹141.29 crore for Transmission Business and ₹6.37 crore for SLDC Business. Considering the other employee cost for FY 2015-16, the combination (0.50*CPIn+0.50*WPIn) i.e., 2.93% is applied for determining the base for FY 2016-17. Subsequently, this base figure of FY 2016-17 is considered as base for FY 2017-18 and so on. Detailed calculation of other employee cost for MYT Control period is shown in Table 5.2.

Table 5.2: Employee Expense approved for the Control Period from FY 2017-18 to FY 2019-20

(₹crore)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
(I)	**Transmission**			
1.	Salaries &other employee cost	149.69	154.07	158.57
2.	Terminal Benefits	280.89	291.65	307.10
3.	Total	430.58	445.72	465.67
(II)	**SLDC**			
4.	Salaries &other employee cost	6.75	6.95	7.15
5.	Terminal Benefits	0.00	0.00	0.00
6.	Total	6.75	6.95	7.15
7.	**Grand Total**	**437.33**	**452.67**	**472.82**

Therefore, the Commission approves ₹430.58 crore for FY 2017-18, ₹445.72 crore for FY 2018-19 & ₹465.67 crore for FY 2019-20 as Employee Cost for Transmission business and ₹6.75 crore for FY 2017-18, ₹6.95 crore for FY 2018-19 & ₹7.15 crore for FY 2019-20 for SLDC Business.

5.6 Investment Plan / Capital Expenditure

PSTCL filed Petitions (No. 44 of 2016 and 45 of 2016) for approval of Capital Investment Plan and Business Plan for MYT Control Period (FY 2017-18 to FY 2019-20) under Regulations 9 and 10 of PSERC (Terms and Conditions for Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulation, 2014 (MYT Regulations)on 30.05.2016.

5.6.1 Investment Plan for Transmission Business

PSTCL has projected a capital expenditure of ₹371.50 crore for FY 2017-18, ₹242.61 crore for FY 2018-19 and ₹145.33 crore for FY 2019-20. The amount of capital expenditure and capitalization projected by PSTCL is given in Table 5.3.

PSTCL submitted that it is entitled to earn minimum profit equivalent to RoE every year in accordance with PSERC MYT Regulations, 2014, which specify the normative debt equity ratio of 70:30. PSTCL further submitted that it will utilize the said profit, being internal accruals, as equity infusion for the capital expenditure during the Control Period. PSTCL has considered the equity amount @ 30% of the capital expenditure.

Table 5.3: Capital expenditure and capitalization projected by PSTCL for Transmission Business for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Transmission		FY 2017-18	FY 2018-19	FY 2019-20
1.	Capital Expenditure	371.50	242.61	145.33
2.	Capitalization	180.19	469.76	129.01

5.6.2 **Investment Plan for SLDC Business**

PSTCL has projected a capital expenditure of ₹10.00 crore each for FY 2017-18, FY 2018-19 and FY 2019-20 respectively. The details of capital expenditure projected by PSTCL for SLDC business are given in Table 5.4.

Table 5.4: Capital expenditure and capitalization projected by PSTCL for SLDC Business for Control Period FY 2017-18 to FY 2019-20

(₹crore)

SLDC		FY 2017-18	FY 2018-19	FY 2019-20
1.	Capital Expenditure	10.00	10.00	10.00
2.	Capitalization	10.00	10.00	10.00

Petitioner's Submission

5.6.3 PSTCL has submitted that the capital expenditure claimed is in line with the Capital Investment Plan for MYT Control Period.

PSTCL expressed difficulty in submission of technical specifications, capitalization schedule, cost benefit etc., as the detailed information was not available at that stage.

5.6.4 **Commission's Analysis:**

a) The Commission has examined the capital expenditure projected by PSTCL for the Control Period. Considering the submissions of PSTCL and capacity of transmission lines, the Commission provisionally approves capital expenditure of ₹328.29 crore for FY 2017-18, ₹248.01 for FY 2018-19 and ₹202.64 crore for FY 2019-20 for Transmission Business and ₹10.00 crore each for the respective year of Control period for SLDC Business.

b) The Commission provisionally considers PSTCL's debt equity ratio of 70:30 to fund its capital expenditure during the Control Period. The approved amount of capital expenditure, capitalization and funding of capital expenditure for each year of Control Period by the Commission are as shown in Table 5.5. The Commission also determines the amount of capitalization (in proportion to the opening balance of capital work in progress and the capital expenditure approved for the year) to be transferred to the block of GFA as additions to fixed assets for the respective year of the Control Period as mentioned in Table 5.6.

Table 5.5: Approved (provisionally) capital expenditure and capitalization for the Control period from FY 2017-18 to FY 2019-20

(₹crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
	Transmission			
1	Capital expenditure	328.29	248.01	202.64
2	Debt @70% of CAPEX	229.80	173.61	141.85
3	Equity up to 30% of CAPEX	98.49	74.40	60.79
4	Capitalization	234.63	572.91	163.92
	SLDC			
5	Capital expenditure	10.00	10.00	10.00
6	Debt @70% of CAPEX	7.00	7.00	7.00
7	Equity up to 30% of CAPEX	3.00	3.00	3.00
8	Capitalization	14.50	10.01	10.00

Table 5.6: Gross Fixed Assets approved for the Control Period from FY 2017-18 to FY 2019-20

(₹crore)

Particulars	Opening GFA	Additions during the Year	Closing GFA	Average GFA
Transmission				
FY 2016-17	8385.09	496.93	8882.02	8633.56
FY 2017-18	8882.02	234.63	9116.65	8999.34
FY 2018-19	9116.65	572.91	9689.56	9403.11
FY 2019-20	9689.56	163.92	9853.48	9771.52
SLDC				
FY 2016-17	14.78	3.40	18.18	16.48
FY 2017-18	18.18	14.50	32.68	25.43
FY 2018-19	32.68	10.01	42.69	37.69
FY 2019-20	42.69	10.00	52.69	47.69

Therefore, the Commission approves the capital expenditure and capitalization as stated in the tables above.

5.7 Repair and Maintenance (R&M) & Administrative and General (A&G) Expenses

5.7.1 PSTCL has claimed R&M and A&G expenses for Transmission Business and SLDC Business for FY 2017-18, FY 2018-19 & FY 2019-20as per details in Table 5.7.

Table 5.7: R&M and A&G Expenses projected by PSTCL for the Control Period FY 2017-18 to FY 2019-20

(₹crore)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
(I)	**Transmission**			
1.	Gross R&M and A&G expenses	57.43	59.43	61.28
2.	Add: Audit Fee	1.00	1.00	1.00
3.	Add: License /ARR fee	0.50	0.50	0.50
4.	Total	58.93	60.93	62.78
(II)	**SLDC**			
5.	R&M and A&G expenses	2.60	3.34	4.08
6.	**Grand Total**	**61.53**	**64.27**	**66.86**

5.7.2 Petitioner's Submission

a) PSTCL submits that R&M and A&G expenses have been linked to "K" and WPI index, where "K" is constant governing relationship between R&M and A&G expenses and Gross Fixed Assets. PSTCL has considered Actual amount of R&M and A&G expenses and GFA for FY 2015-16 for computing "K" as shown in Table 5.8.

Table 5.8: Computation of K for FY 2015-16 by PSTCL

(₹crore)

Sr. No.	Particulars	Transmission	SLDC
1.	GFA as on 01.04.2015	8054.17	8.32
2.	GFA as on 31.03.2016	8398.99	14.78
3.	R&M Expenses	33.35	0.18
4.	A&G Expenses	16.04	0.65
5.	R&M and A&G expenses as % of Average GFA (K)	0.60%	7.21%

PSTCL has considered the escalation index of 2.53% based on WPI increase from April to September, 2015 and April to September, 2016 for the purpose of projection of R&M and A&G expenses.

5.7.3 Commission's Analysis

a) As per Regulation 26 of PSERC MYT Regulations, 2014, R&M and A&G expenses are to be calculated, as under:

(i) R&Mn + A&Gn = K*GFA*(WPIn/WPIn-1)

Where,

- *'K' is a constant (expressed in %) governing the relationship between R&M and A&G expenses and Gross Fixed Assets (GFA) for the n^{th} 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 n^{th} year*
- ***WPIn*** *means the average rate (on monthly basis) of Wholesale Price Index (all commodities) over the year for the n^{th} year.*

b) Actual amount of Gross Fixed Assets, R&M and A&G expenses have been considered, based on Audited Annual Accounts for FY 2015-16, for computation of 'K' for FY 2015-16 as base and for calculation of allowable expenses for Control Period for Transmission and SLDC business. Computation of 'K' for FY 2015-16 is shown in Table 5.9.

Table 5.9: Calculation of 'K' for FY 2015-16 by the Commission

(₹crore)

Particulars	**Transmission**	**SLDC**
GFA as on 01.04.2015	8054.17	8.32
GFA as on 31.03.2016	8385.09	14.78
Average GFA for FY 2015-16	8219.63	11.55
R&M expenses for 2015-16	33.62	0.18
A&G expenses for 2015-16	15.90	0.65
Total R&M and A&G expenses	49.52	0.83
'K' (% of R&M and A&G expenses over average GFA)	**0.60%**	**7.19%**

c) For computation of 'K' for MYT Control Period, k factor for FY 2015-16 has been considered as base. Further 'K' for FY 2016-17 has been escalated with WPI increase @1.73% to derive the 'K' for the Control Period. Detailed calculation is shown in Table 5.10.

Table 5.10: Calculation of 'K' for R&M and A&G expenses for MYT Control Period FY 2017-18 to FY 2019-20 by the Commission

Transmission	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
'K'	0.60%	0.61%	0.62%	0.63%
WPI index	1.73%	1.73%	1.73%	1.73%
['K' +('K' *WPI)]	**0.61%**	**0.62%**	**0.63%**	**0.64%**
SLDC				
'K'	7.19%	7.31%	7.44%	7.57%
WPI index	1.73%	1.73%	1.73%	1.73%
['K' + ('K' * WPI)]	**7.31%**	**7.44%**	**7.57%**	**7.70%**

d) R&M and A&G expenses for MYT Control Period to be approved are calculated by multiplying the respective escalated 'K' for FY 2017-18 to FY 2019-20 with their respective values of average gross fixed assets as per Table 5.6. The detailed calculation for R&M and A&G expenses approved by the Commission is shown in Table 5.11.

Table 5.11: R&M and A&G expenses approved for MYT Control Period FY 2017-18 to FY 2019-20

(₹crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Transmission	**SLDC**	**Transmission**	**SLDC**	**Transmission**	**SLDC**
Average GFA	8999.34	25.43	9403.10	37.68	9771.52	47.69
Escalated 'K'	0.62%	7.44%	0.63%	7.57%	0.64%	7.70%
R&M and A&G Expenses	55.80	1.89	59.24	2.85	62.54	3.67
Add: Audit fee	1.00	0.00	1.00	0.00	1.00	0.00
Add: License fee	0.50	0.00	0.50	0.00	0.50	0.00
Total R&M and A&G expenses	**57.30**	**1.89**	**60.74**	**2.85**	**64.04**	**3.67**

The Commission, therefore provisionally approves R&M and A&G expenses of ₹57.30crore for FY 2017-18, ₹60.74crore for FY 2018-19 and ₹64.04 crore for FY 2019-20 in Transmission Business. Also, ₹1.89 crore for FY 2017-18, ₹2.85 crore for FY 2018-19 and ₹3.67 crore for FY 2019-20 in SLDC Business.

5.8 Depreciation

5.8.1 PSTCL has claimed depreciation charges for its Transmission Business and SLDC Business on average of opening and closing GFA for FY 2017-18, 2018-19 & 2019-20 as per details in Table 5.12.

Table 5.12: Depreciation projected by PSTCL for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
(I)	**Transmission**			
1.	Opening GFA (net of land and land rights)	6319.50	6499.68	6969.44
2.	Add: Additions during the year	180.19	469.76	129.01
3.	Closing GFA (1+2)	6499.69	6969.44	7098.45
4.	Depreciation @5.23%	335.38	352.39	368.05
(II)	**SLDC**			
4.	Opening GFA	30.20	40.20	50.20
5.	Add: Additions to GFA during the year	10.00	10.00	10.00
6.	Closing GFA (1+2)	40.20	50.20	60.20
7.	Depreciation @6.00%	2.11	2.71	3.31
8.	Total GFA of PSTCL (3+6)	6539.88	7019.64	7158.65
9.	**Total Depreciation (4+7)**	**337.49**	**355.10**	**371.36**

5.8.2 **Petitioner's Submission**

PSTCL has computed the depreciation on estimated GFA as on 01.04.2017 and projected addition of assets during the Control Period. PSTCL has considered the average depreciation rate of 5.23% for Transmission and 6.00% for SLDC based on actual values of FY 2015-16.

5.8.3 **Commission's Analysis**

a) The Commission has considered the actual rate of depreciation @4.61% from the Annual Audited Accounts of FY 2015-16 taking into account the actual amount of depreciation and total GFA (excluding land and land rights) as on 31.03.2016 for the purpose of calculating depreciation for the Control Period.

b) Closing balance of GFA as on 31.03.2016 is of ₹5472.99 crore (excluding land and land rights) as per the Audited Annual Accounts for FY 2015-16 of PSTCL and the additions approved for FY 2016-17 of ₹500.33crore at the time of review under (Para 4.6.8 of this Tariff Order) have been considered for deriving the opening balance of GFA for FY 2017-18.

c) The depreciation to be allowed for the Control Period have been determined by applying the rate of depreciation @4.61% on average value of GFA (excluding land and land rights) for respective years of the Control Period. Detailed calculation of depreciation is shown in Table 5.13.

Table 5.13: Depreciation approved for MYT Control Period FY 2017-18 to FY 2019-20

(₹crore)

	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
(I)	**Transmission**			
1.	Opening GFA(excluding land and land rights)	5955.14	6189.77	6762.68
2.	Add: Additions to GFA during the year	234.63	572.91	163.92
3.	Closing GFA	6189.77	6762.68	6926.60
4.	Average GFA	6072.46	6476.23	6844.64
5.	**Depreciation @4.61% of average GFA**	**279.94**	**298.55**	**315.54**
(II)	**SLDC**			
4.	Opening GFA	18.18	32.68	42.69
5.	Add: Additions to GFA during the year	14.50	10.01	10.00
6.	Closing GFA	32.68	42.69	52.69
7.	Average GFA	25.43	37.69	47.69
8.	**Depreciation @4.61% of average GFA**	**1.17**	**1.74**	**2.20**

Therefore, the Commission approves total depreciation charges for Transmission and SLDC business for the Control Period as stated above in the table.

5.9 Interest and Finance charges

5.9.1 In the ARR petition for MYT Control Period from FY2017-18 to FY 2019-20, PSTCL has claimed interest charges of ₹407.52 crore (net of capitalization of ₹53.50 crore) for Transmission Business and ₹2.89 crore for SLDC Business for FY 2017-18, ₹404.45 crore (net of capitalization of ₹52.14 crore) for Transmission Business and ₹3.80 core for SLDC Business for FY 2018-19 and ₹400.72 crore (net of capitalization of ₹40.30 crore) for Transmission Business and ₹4.64 crore for SLDC Business for FY 2019-20. The interest and finance charges are discussed in the ensuing paragraphs.

5.9.2 The interest on long term loan as claimed by PSTCL for Transmission Business is indicated in Table 5.14.

Table 5.14: Interest on loan claimed by PSTCL for Transmission Business for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1.	Opening balance of long term loan	4154.40	4127.21	3974.95
2.	Add: Receipt of loan during the year	277.59	166.83	98.73
3.	Less: Repayment of loan during the year	304.78	319.09	308.95
4.	Closing balance of loan	4127.21	3974.95	3764.73
5.	Gross Interest	461.01	456.58	441.01
6.	Less: Capitalization	53.50	52.14	40.30
7.	**Net Interest Charges**	**407.51**	**404.44**	**400.71**

Similarly, PSTCL has projected interest and finance charges of ₹2.89 crore for FY 2017-18, ₹3.80 crore for FY 2018-19 and ₹4.64 crore for FY 2019-20 for SLDC Business of PSTCL as indicated in Table 5.15.

Table 5.15: Interest on loan claimed by PSTCL for SLDC Business for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1.	Opening balance of long term loan	20.03	27.92	35.21
2.	Add: Receipt of loan during the year	10.00	10.00	10.00
3.	Less: Repayment of loan during the year	2.11	2.71	3.31
4.	Closing balance of loan	27.92	35.21	41.90
5.	Gross Interest	2.89	3.80	4.64
6.	Less: Capitalization	0.00	0.00	0.00
7.	**Net Interest Charges**	**2.89**	**3.80**	**4.64**

5.9.3 **Petitioner's Submission**

a) The outstanding existing loan includes loan from REC, LIC, Commercial banks, Loan from PSPCL. The repayment of these existing loans and interest expenses has been considered as per their repayment schedule.

b) PSTCL has proposed new loans for the proposed investments from Banks/Financial Institution at actual weighted average rate of Interest.

5.9.4 Commission's Analysis

a) The Commission has approved the receipt of loan during the year for the respective years of the Control Period by adjusting the approved amount of capital expenditure in the debt-equity ratio (i.e., 70:30) as shown in Table 5.5 for the respective years.

b) The repayment of loans for the respective years of the Control Period is considered as per claim by PSTCL for respective years of MYT Control Period. The rate of interest as claimed by PSTCL has been considered. However, actual capital expenditure incurred and loan taken by PSTCL shall be re-examined for any variance in utilization of debt, based on loan agreement(s), utilization details, which the utility shall produce at the time of Annual Performance Review / True Up.

c) The detailed calculation of opening and closing balances of loan for Transmission and SLDC Business are shown in Table 5.16 and Table 5.17.

Table 5.16: Interest on long term loan for Transmission Business approved for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
1.	Opening balance of loan	3740.88	3665.90	3520.42
2.	Add: Receipt of loan during the year	229.80	173.61	141.85
3.	Less: Repayment of loan during the year	304.78	319.09	308.95
4.	Closing balance of loan	3665.90	3520.42	3353.32
5.	Average Loan	3703.39	3593.16	3436.87
6.	Rate of Interest	11.10%	11.24%	11.36%
7.	**Interest Charges**	**411.08**	**403.87**	**390.43**

Table 5.17: Interest on long term loan for SLDC Business approved for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
1.	Opening Loan balance	6.96	11.85	16.14
2.	Add: Receipt of loan during the year	7.00	7.00	7.00
3.	Less: Repayment of loan during the year	2.11	2.71	3.31
4.	Closing Loan balance	11.85	16.14	19.83
5.	Average Loan	9.41	14.00	17.99
6.	Rate of Interest	12.05%	12.04%	12.03%
7.	**Interest Charges**	**1.13**	**1.68**	**2.16**

The Commission, therefore, approves the interest charges for Transmission and SLDC business for the Control Period as stated in the above tables.

5.9.5 **Finance Charges**

PSTCL has claimed finance charges of ₹1.37 crore each for FY 2017-18, FY 2018-19 and FY 2019-20 respectively for its Transmission Business and the Commission approves₹1.22 crore for FY 2017-18, ₹1.21 for FY 2018-19 and ₹1.22 for FY 2019-20 based on the loan approved by the Commission for the respective years for Transmission business of PSTCL.

5.9.6 **Capitalization of Interest Charges**

PSTCL has claimed ₹53.50 crore for FY 2017-18, ₹52.14 crore for FY 2018-19 and ₹40.30 crore for FY 2019-20 towards capitalization of interest charges for its Transmission Business. The Commission approves the capitalization of interest of ₹53.50 crore for FY 2017-18, ₹52.14 crore for FY 2018-19 and ₹40.30 crore for FY 2019-20. PSTCL has not claimed any capitalization of interest charges for its SLDC Business. The Commission, therefore, approves nil capitalization of interest charges for SLDC Business of PSTCL for FY 2017-18, FY 2018-19 and FY 2019-20.

5.9.7 The Commission approves interest charges for PSTCL for its Transmission Business for FY 2017-18, FY 2018-19 and FY 2019-20 as shown in Table 5.18.

Table 5.18: Interest charges (other than WCL) approved for Transmission business for the Control Period FY 2017-18 to FY 2019-20.

(₹crore)

Sr. No	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1.	Interest charges	411.08	403.87	390.43
2.	Add: Finance charges	1.22	1.21	1.22
3.	Total Interest charges	412.29	405.07	391.65
4.	Less: Interest capitalized	53.50	52.14	40.30
5.	**Net Interest charges**	**358.80**	**352.94**	**351.35**

The Commission approves the Interest and Finance charges (net of capitalization) of ₹358.80 crore for FY 2017-18, ₹352.94 crore for FY 2018-19 and ₹351.35 crore for FY 2019-20 the Transmission Business of PSTCL, similarly, ₹1.13 crore for FY 2017-18, ₹1.68 crore for FY 2018-19 and ₹2.16 crore for FY 2019-20 for the SLDC Business of PSTCL.

5.10 Interest on Working Capital

5.10.1 PSTCL has claimed interest on working capital of ₹46.13 for FY 2017-18, ₹48.10 crore for FY 2018-19 and ₹50.19 crore for FY 2019-20 for Transmission Business, on normative basis, on a total working capital of ₹386.05 crore for FY 2017-18, ₹402.47 crore for FY 2018-19 and ₹420.02 crore for FY 2019-20. The details of total working capital and Interest on working capital for FY 2017-18, FY 2018-19 and FY 2019-20 are shown in Table 5.19.

Table 5.19: Interest on working capital for Transmission Business for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
1.	Receivables for two months	248.53	258.47	268.27
2.	Maintenance spares @15% of O&M expenses	88.40	92.57	97.55
3.	O&M expenses for one month	49.12	51.43	54.20
4.	Working capital requirement	386.05	402.47	420.02
5.	Rate of Interest (%)	11.95%	11.95%	11.95%
6.	**Interest on working capital**	**46.13**	**48.10**	**50.19**

5.10.2 In the ARR petition, PSTCL has claimed interest on working capital of ₹0.81 for FY 2017-18, ₹0.90 crore for FY 2018-19 and ₹0.99 crore for FY 2019-20 for SLDC Business, on normative basis, on a total working capital of ₹6.94 crore for FY 2017-18, ₹7.69 crore for FY 2018-19 and ₹8.45 crore for FY 2019-20. The details of total working capital and Interest on working capital for FY 2017-18, FY 2018-19 and FY 2019-20 are shown in Table 5.20.

Table 5.20: Interest on working capital for SLDC Business for Control Period FY 2017-18 to FY 2019-20

(₹crore)

	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1.	Receivables for two months	4.56	5.06	5.56
2.	Maintenance spares @15% of O&M expenses	1.53	1.69	1.86
3.	O&M expenses for one month	0.85	0.94	1.03
4.	Working capital requirement	6.94	7.69	8.45
5.	Rate of Interest (%)	11.72%	11.72%	11.72%
6.	**Interest on working capital**	**0.81**	**0.90**	**0.99**

5.10.3 **Petitioner's Submission**

a) PSTCL has submitted that it has computed the working capital requirement in accordance with Regulation 54 of PSERC MYT Regulations, 2014 for Transmission and SLDC Business.

b) PSTCL has considered the actual weighted average rate of interest based for FY 2015-16 for computation of interest on working capital.

5.10.4 **Commission's Analysis**

a) The Commission has computed the interest on working capital considering the average rate of interest for the respective year of the Control Period for Transmission Business. The detailed calculation of Interest on working capital approved is shown in Table 5.21.

Table 5.21: Interest on working capital for Transmission Business approved for Control period FY 2017-18 to FY 2019-20

(₹crore)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
1.	Receivables for two months	202.83	210.61	219.15
2.	Maintenance spares @15% of O&M expenses	73.18	75.97	79.46
3.	O&M expenses for one month	40.66	42.20	44.14
4.	Working capital requirement	316.67	328.78	342.75
5.	Rate of Interest (%)	11.95%	11.95%	11.95%
6.	**Interest on working capital**	**37.84**	**39.29**	**40.96**

The Commission, thus, approves ₹37.84 crore for FY 2017-18, ₹39.29 crore for FY 2018-19 and ₹40.96 crore FY 2019-20 on working capital requirement of ₹316.67 crore for FY 2017-18, ₹328.78 crore for FY 2018-19 and ₹342.75 crore for FY 2019-20 for Transmission Business of PSTCL.

b) The Commission has computed the interest on working capital considering the average rate of interest for the respective year of the Control Period for SLDC business. The detailed calculation of interest on working capital approved is shown in Table 5.22.

Table 5.22: Interest on working capital for SLDC Business approved for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
1.	Receivables for two months	2.98	3.37	3.71
2.	Maintenance spares @15% of O&M expenses	1.30	1.47	1.62
3.	O&M expenses for one month	0.72	0.82	0.90
4.	Working capital requirement	5.00	5.66	6.23
5.	Rate of Interest (%)	11.72%	11.72%	11.72%
6.	**Interest on working capital (4*5)**	**0.59**	**0.66**	**0.73**

The Commission, thus, approves ₹0.59 crore for FY 2017-18, ₹0.66 crore for FY 2018-19 and ₹0.73 crore for FY 2019-20 on working capital requirement of ₹5.00 crore for FY 2017-18, ₹5.66 crore for FY 2018-19 and ₹6.23 crore for FY 2019-20 for SLDC business of PSTCL.

5.11 Return on Equity (RoE)

5.11.1 In the ARR petition for MYT Control Period from FY2017-18 to FY 2019-20, PSTCL has claimed RoE of ₹101.19 crore for FY 2017-18, ₹114.34 crore for FY 2018-19 and ₹123.83 crore for FY 2019-20 as per details given in Table 5.23.

Table 5.23: Return on Equity claimed by PSTCL for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
	Transmission			
1.	Opening Equity	605.88	699.79	775.57
2.	Add: Addition of equity during the year	93.91	75.78	46.60
3.	Closing Equity	699.79	775.57	822.17
4.	Rate of RoE	15.50%	15.50%	15.50%
5.	**Return on Equity**	**101.19**	**114.34**	**123.83**

5.11.2 **Petitioner's Submission**

a) PSTCL has submitted that it has computed Return on Equity for the Control Period in accordance with Regulation 20of PSERC MYT Regulations, 2014.

b) PSTCL has considered the addition of equity equivalent to 30% of capital expenditure to the extent for Return of Equity.

5.11.3 **Commission's Analysis**

Return on Equity is being calculated @15.50% on the opening balance of equity for full year and @15.50% on the addition to equity during the year for half year. The detail of RoE calculation is shown in Table 5.24.

Table 5.24: Return on Equity approved for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Sr. No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
	Transmission			
1.	Opening Equity	605.88	707.37	784.77
2.	Add: Addition to equity during the year	101.49	77.40	63.79
3.	Closing Equity	707.37	784.77	848.56
4.	Average Equity	656.63	746.07	816.67
5.	Rate of RoE	15.50%	15.50%	15.50%
6.	**Return on Equity**	**101.78**	**115.64**	**126.58**

The Commission, thus, approves RoE of ₹101.78 crore for FY 2017-18, ₹115.64 crore for FY 2018-19 and ₹126.58 crore for FY 2019-20.

5.12 ULDC Charges

PSTCL has claimed ₹12.36 crore for FY 2017-18, ₹12.67 crore for FY 2018-19 and ₹12.99 crore for FY 2019-20 towards ULDC charges by applying the escalation factor of 2.53% over the actual ULDC charges for FY 2015-16. Actual amount of ULDC charges for SLDC Business of PSTCL as per Annual Audited Accounts of PSTCL for FY 2015-16 is ₹11.76 crore, Since ULDC Charges are decided by CERC from time to time, **the Commission finds it appropriate to allow ULDC charges same as actual ULDC charges of FY 2015-16 of ₹11.76 crore for each year of Control Period.**

5.13 Non-Tariff Income

PSTCL has claimed receipts of ₹10.00 crore each for Transmission Business and ₹1.00 crore each for SLDC Business for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

5.13.1 Petitioner's Submission

a) PSTCL has submitted that income from late payment surcharges is also considered under Non-tariff income, the objective being bringing discipline in payments by Licensees.

b) PSTCL has earned non-tariff income in the past for rental charges of staff quarters, sale of tender forms, income from staff welfare activities etc. This income received in primarily related to fixed activities and is not likely to increase in future. PSTCL has not considered any income towards transmission charges and operating charges of Open Access Customers.

5.13.2 Commission's Analysis

As discussed in Para 4.12 of this Tariff Order, Non-tariff income for Transmission Business for FY 2016-17 is approved at ₹49.25 crore and for SLDC Business is approved at ₹5.41 crore for FY 2016-17. The Commission decides that the Non-tariff income for Transmission Business and SLDC Business for the Control Period of the utility be taken at the previous year's level.

Accordingly, the Commission approves Non-tariff Income of ₹49.25 crore for Transmission Business and ₹5.41 crore for SLDC Business for each year of Control Period.

5.14 Tax on Income

PSTCL has claimed ₹21.60 crore for FY 2017-18, ₹24.40 crore for FY 2018-19 and

₹26.43 crore for FY 2019-20 as Income tax on income.

5.14.1 **Petitioner's Submission**

a) PSTCL has submitted that the taxes on income should not be limited to tax on RoE allowed and should be allowed as actuals, as PSTCL is not recovering any amount that has not been approved for recovery by the Commission.

b) At this stage, PSTCL has computed the income tax on RoE with the applicable MAT rate @21.34% without prejudice to the above said prayer of the income tax claimed by PSTCL.

5.14.2 **Commission's Analysis**

Regulation 23(2) of PSERC MYT Regulations, 2014, states as under:

"Taxes on income, if actually liable to be paid, shall be limited to tax on return on equity allowed, excluding incentives".

The Commission consider it appropriate to allow the tax on the basis of Audited Annual Accounts of the utility as and when the same are submitted by PSTCL. As such, no amount on this account is allowed at this stage for MYT Control Period FY 2017-18 to FY 2019-20 as it is to be allowed on actual payment basis at the time of True up for the respective years.

5.15 Annual Revenue Requirement (ARR)

The summary of the ARR for Transmission Business, SLDC Business and for overall PSTCL for FY 2017-18, FY 2018-19 and FY 2019-20 is shown in Table 5.25, Table 5.26 and Table 5.27.

Table 5.25: Annual Revenue Requirement of Transmission Business for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Sr. No.	Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
		Projected for FY 2017-18	Approved by the Commission for FY 2017-18	Projected for FY 2018-19	Approved by the Commission for FY 2018-19	Projected for FY 2019-20	Approved by the Commission for FY 2019-20
I	II	III	IV	V	VI	VII	VIII
1.	Employee cost	530.43	430.58	556.23	445.72	587.60	465.67
2.	R&M and A&G expenses	58.93	57.30	60.93	60.74	62.78	64.04
3.	Depreciation	335.38	279.94	352.39	298.55	368.05	315.54
4.	Interest charges	407.51	358.80	404.44	352.94	400.71	351.35
5.	Interest on working capital	46.13	37.84	48.10	39.29	50.19	40.96
6.	RoE	101.19	101.78	114.34	115.64	123.83	126.58
7.	ULDC charges	-	-	-	-	-	-
8	Income Tax	21.60	-	24.40	-	26.43	-
9.	**Total Revenue Requirement**	**1501.17**	**1266.24**	**1560.83**	**1312.88**	**1619.59**	**1364.14**
10.	Less: Non-Tariff Income	10.00	49.25	10.00	49.25	10.00	49.25
11.	**Net Revenue Requirement**	**1491.17**	**1216.99**	**1550.83**	**1263.63**	**1609.59**	**1314.89**

Table 5.26: Annual Revenue Requirement of SLDC Business for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Sr. No.	Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
		Projected for FY 2017-18	Approved by the Commission for FY 2017-18	Projected for FY 2018-19	Approved by the Commission for FY 2018-19	Projected for FY 2019-20	Approved by the Commission for FY 2019-20
I	II	III	IV	V	VI	VII	VIII
1.	Employee cost	7.59	6.75	7.94	6.95	8.32	7.15
2.	R&M and A&G expenses	2.60	1.89	3.34	2.85	4.08	3.67
3.	Depreciation	2.11	1.17	2.71	1.74	3.31	2.20
4.	Interest charges	2.89	1.13	3.80	1.68	4.64	2.16
5.	Interest on working capital	0.81	0.59	0.90	0.66	0.99	0.73
6.	Return on Equity	0.00	0.00	0.00	0.00	0.00	0.00
7.	ULDC charges	12.36	11.76	12.67	11.76	12.99	11.76
8.	Income Tax	0.00	0.00	0.00	0.00	0.00	0.00
9.	**Total Revenue Requirement**	**28.36**	**23.29**	**31.36**	**25.64**	**34.33**	**27.67**
10.	Less: Non-Tariff Income	1.00	5.41	1.00	5.41	1.00	5.41
11.	**Net Revenue Requirement**	**27.36**	**17.88**	**30.36**	**20.23**	**33.33**	**22.26**

Table 5.27: Annual Revenue Requirement of PSTCL for Control Period FY 2017-18 to FY 2019-20

(₹crore)

Sr. No.	Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
		Projected for FY 2017-18	Approved by the Commission for FY 2017-18	Projected for FY 2018-19	Approved by the Commission for FY 2018-19	Projected for FY 2019-20	Approved by the Commission for FY 2019-20
I	II	III	IV	V	VI	VII	VIII
1.	Employee cost	538.02	437.33	564.17	452.67	595.92	472.82
2.	R&M and A&G expenses	61.53	59.19	64.27	63.59	66.86	67.71
3.	Depreciation	337.49	281.11	355.10	300.29	371.36	317.74
4.	Interest charges	410.40	359.93	408.24	354.62	405.35	353.51
5.	Interest on working capital	46.94	38.43	49.00	39.95	51.18	41.69
6.	Return on Equity	101.19	101.78	114.34	115.64	123.83	126.58
7.	ULDC charges	12.36	11.76	12.67	11.76	12.99	11.76
8.	Income tax	21.60	0.00	24.40	0.00	26.43	0.00
9.	**Total Revenue Requirement**	**1529.53**	**1289.53**	**1592.19**	**1338.52**	**1653.92**	**1391.81**
10.	Less: Non-Tariff Income	11.00	54.66	11.00	54.66	11.00	54.66
11.	**Net Revenue Requirement**	**1518.53**	**1234.87**	**1581.19**	**1283.86**	**1642.92**	**1337.15**

The Net Revenue Requirement of ₹1234.87crore for FY 2017-18, ₹1283.86 crore for FY 2018-19 and ₹1337.15 crore for FY 2019-20 are the Transmission Charges recoverable from PSPCL.

Chapter 6
Directives

Compliance of Commission's Directives

The Commission has been issuing directives to PSTCL through Tariff Orders to ensure achievement of higher efficiency & performance levels so as to ensure uninterrupted flow of power available from different sources to various load centres in the State. The endeavour of the Commission has also been to introduce latest technological advances in the field of power systems to bring transparency and accountability in the working of the Power Sector.

The directives of the Commission are an integral part of the Tariff Order with which the Transmission licensee is required to comply in order to fulfill its obligation under the Act, to provide quality supply to the consumers of the State. However, it has been observed by the Commission that the compliance of the directives by PSTCL has not been satisfactory. The status of compliance of directives issued in the Tariff Order for FY 2016-17along with comments of the Commission and further directives for compliance by PSTCL during FY 2017-18 is summarized as under:

<table>
<tr><th>Sr. No.</th><th>Issues</th><th>PSERC's Comments/ Directives for FY 2016-17</th><th>PSTCL's Reply</th><th>PSERC Comments & Directives</th></tr>
<tr>
<td>6.1</td>
<td>Boundary metering, Energy Audit and reduction in transmission losses</td>
<td>The Commission notes with concern that the Boundary Metering Project, which was to be commissioned in July, 2013, has still not been operationalised and data of transmission losses could only be generated for June and July, 2015.The Commission directs PSTCL to ensure submission of data of transmission losses w.e.f. July, 2016 regularly on monthly basis and any further slippage shall invite punitive action.</td>
<td>The Overall transmission losses are being worked out and reported regularly to Hon'ble PSERC since Jul-2016.
The losses figures are as given below:-
<table>
<tr><th>Sr. No.</th><th>Month</th><th>Overall Transmission Losses (%age)</th></tr>
<tr><td>1</td><td>Jul-2016</td><td>*2.37</td></tr>
<tr><td>2</td><td>Aug-2016</td><td>*3.58</td></tr>
<tr><td>3</td><td>Sep-2016</td><td>4.09</td></tr>
<tr><td>4</td><td>Oct-2016</td><td>4.16</td></tr>
<tr><td>5</td><td>Nov-2016</td><td>4.58</td></tr>
<tr><td>6</td><td>Dec-2016</td><td>7.09</td></tr>
<tr><td>7</td><td>Jan-2017</td><td>6.03</td></tr>
<tr><td>8</td><td>Feb-2017</td><td>4.68</td></tr>
<tr><td>9</td><td>Mar-2017</td><td>4.52</td></tr>
</table>
*After field verifications, the transmission losses for July & August 2016 have been revised to 2.37% & 3.58% respectively.</td>
<td>The Commission observes that the transmission losses are very high for 132/220/400 kV network in a geographically very small State. The transmission loss of 7.09% & 6.03% in Dec. 2016 & Jan. 2017 respectively needs to be explained. The voltage wise transmission losses i.e. losses at 400/220/132 kV& transformation losses etc needs to be examined to pin point high loss segments. The Commission directs PSTCL to submit the necessary information to the Commission along with reasons for high transmission losses. PSTCL shall submit the roadmap to reduce these losses to below 2.5%, within one month of the issue of this Tariff Order.</td>
</tr>
</table>

Sr. No.	Issues	PSERC's Comments/ Directives for FY 2016-17	PSTCL's Reply	PSERC Comments & Directives
6.2	**Employee Cost**	**a) Man power:** The Commission in the Tariff Order for FY2015-16 directed PSTCL to finalize the roadmap regarding rationalization & increasing productivity of the manpower and submit its action plan within three months of the issuance of the Tariff Order but PSTCL has failed to implement the directive. The restructuring plan finalised by PSTCL must be supplied to the Commission along with schedule for implementation of various activities within one month of the issuance of this tariff Order.	**a) Man power:** The order regarding revised manpower structure/organizational structure of PSTCL has been issued vide office order no. 225 dated 22.03.2016 and copy sent to Hon'ble Commission vide this office Memo No. 2612 dated 14.09.2016. The revised manpower structure/organizational structure is already effective from 01.04.2016.	**a) Man power:** The Commission notes the action taken and directs PSTCL to share the reduction of employee cost achieved with implementation of revised organizational structure made effective from 01.04.2016.
		b) Unmanned Su-stations: Despite repeated directions, PSTCL has failed to cover even one grid substation under this project till date. PSTCL must ensure completion of the work of five number 220 kV grid substations identified for this project by Nov. 2016 as committed by PSTCL. The progress report must be submitted monthly to the Commission. **c) Training:** The Commission notes the action taken by PSTCL. The Action plan to establish Advanced Training Centre at Patiala be shared with the Commission within three months of issue of this Tariff Order.	**b) Unmanned Sub-stations:** Inspection of some of C&R panels and Loose equipment destined for two substations covered under the project has been carried out and the material has also reached at the sites. The Engineer from the Company has also reached the site but no significant work has been carried out by him regarding the project. The Company has also been directed by this office to expedite the commissioning process. Also inspection call for the remaining material to be supplied against the project is still awaited. Agenda note for poor performance of the Company and for taking suitable action against the Company has been submitted to WTDs. **c) Training:** It is intimated that the already approved committee after placing the Expression of Interest (EOI) has shortlisted the 10 nos. Architects/ Consultants for establishing New Advanced Training & Research Institute of PSTCL at 220KV Substation Ablowal. Now, a new extended committee is proposed to be constituted for preparing the specification for hiring an Architects/Consultants, is under	**b) Unmanned Sub-stations:** The Commission notes with serious concern that PSTCL in its submissions in the ARR for FY 2016-17, assured that project for 5 number grid sub-stations will be completed by Nov. 2016. The target date was revised to March 2017. The reasons for not taking up the work at other three grid substations along with commissioning schedule of two grids be shared with the Commission within one month of issue of T.O.2017-18. **c) Training:** The Commission notes the action being taken and directs PSTCL to submit the timelines for setting up of Advanced Training Centre at 220 kV Substation, Ablowal within one month of issue of T.O.2017-18

Sr. No.	Issues	PSERC's Comments/ Directives for FY 2016-17	PSTCL's Reply	PSERC Comments & Directives
		d) Implementation of ERP: The Commission notes the action being taken. The status of the project be shared with the Commission on quarterly basis.	consideration of PSTCL management. **d) Implementation of ERP:** PSTCL has decided to scrap the bid process due to inadequate no. of successful bids. The board of directors has been requested to decide on further course of action with regards to implementation of Enterprise Resource Planning (ERP)	**d) Implementation of ERP:** The Commission notes that no tangible progress has been made to implement ERP project except inviting bids, evaluating bids and finally scrapping the bids without deciding further action on the project. The action plan on the ERP project be shared with the Commission within one month of issue of the Tariff Order for FY 2017-18.
6.3	**Loading Status of PSTCL Transmission lines and Substations.**	**Loading status:** The loading status of all grid sub-stations and lines under the control of PSTCL must be supplied to the Commission after paddy season by 31st Oct., 2016.	**Loading status:** No overloading on any 132/220/400KV Sub-stations or line was observed during the 3rd quarter for the year 2016-17. The same has also been up-loaded on PSTCL's website.	**Loading status:** The Commission observes that over-loading status for 1st, 2nd and 4th quarter of FY 2016-17 has not been uploaded on the website. The Commission directs PSTCL to supply status of over-loading of Substations and lines, if any, to the Commission regularly and ensure that website of PSTCL is updated regularly. Ensure that there is no overloading of any line/sub-station during next paddy season.
6.4	**Mtc. Of category wise details of fixed assets.**	The Commission notes the action taken by PSTCL. The Commission directs PSTCL to submit the status report on preparation of fixed asset register on quarterly basis.	The fixed asset register as on 31.03.2016 category wise, location code wise, value wise (without quantity wise detail) has been prepared at corporate level. The matter regarding preparation of Fixed Asset Register (FAR) quantity wise as well as value wise was taken up with the consultants in respect of two sub-stations namely P&M Mandi Gobindgarh and P&M Ablowal for preparing a draft sample/model. Further, the components of Fixed Assets have been finalized with the consultants and necessary data has also been provided for finalization of draft model of two sub-stations. Once it is finalized, the same will be implemented in all the divisions.	The Commission is not convinced with the reply of PSTCL for slow progress in preparation of Assets Cards and Record. The Commission directs PSTCL to complete the task of preparing the Fixed Assets Cards/Record and submit its status Report within one month of the issue of this Tariff Order.
6.5	**Audited Annual Accounts for FY 2012-13 and FY 2013-14**	Late submission of Audited Annual Accounts by PSTCL results in late true ups of the relevant years. PSTCL is, therefore, directed to ensure timely submission of Audited Annual	Late submission of audited annual accounts for FY 2012-13 and subsequent year is due to late finalisation of PSTCL's balance sheets. Timely submission of audited annual accounts along with reports of Statutory Auditors will be ensured in future.	Audited Annual Report for FY 2015-16 has been supplied to the Commission. PSTCL is directed to ensure timely submission of audited accounts.

Sr. No.	Issues	PSERC's Comments/ Directives for FY 2016-17	PSTCL's Reply	PSERC Comments & Directives
		Accounts along with reports of Statutory Auditors & CAG and reply of management to the observations.		
6.6	**Reactive Compensation**	The final report of the study of reactive compensation conducted by CPRI for 220 kV & 132 kV levels be shared with the Commission within one month of issue of this Tariff Order.	Reactive compensation study report of CPRI has been received and soft copy of the same has already been sent vide this office Memo No. 2612 dated 14.09.2016.	The Commission notes that as per Reactive Compensation report submitted by CPRI for 220 kV & 132 kV levels, the voltage profiles are low for 26 nos. of 220 kV, 45 nos. of 132 kV, 13 nos. of 66 kV and 54 nos. of 11 kV nodes and three nos. of 33 kV nodes. PSTCL has not submitted any action taken by the licensee to implement the recommendation of CPRI. The Commission directs PSTCL to submit the action taken report within one month of issue of Tariff Order.
6.7	**Transmission System for evacuation of power from IPPs.**	The Commission notes the action taken by PSTCL. The transmission system for evacuation of power from Goindwal Sahib TPS to 220 kV Bottianwala needs to be expedited. PSTCL is directed to submit quarterly progress of this work to the Commission.	PSTCL has completed the full 400KV evacuation system related with IPP's of Punjab (i.e. Talwandi Sabo (TPS) and Rajpura (TPS). The evacuation system of Goindwal Sahib(TPS) 2X270MW, is at 220KV voltage and comprises of the following 3D/C lines: i) 220KV Goindwal (TPS)-220KV Sultanpur Lodhi(Erection work completed line charged). ii) 220KV Goindwal (TPS)- 220KV Chohla Sahib (Erection work completed and commissioned in January, 2016). 220KV Goindwal (TPS)- 220KV Bottianwala (Work under progress and likely to be completed by 30.09.2017).	PSTCL submitted in the ARR for FY 2016-17 that 220 kV line from Goindwal Sahib TPS to 220 kV Bottianwala shall be completed by Dec., 2016 but the work is still under progress. PSTCL is directed to complete the work at the earliest, under intimation to the Commission.
6.8	**Calculation of depreciation as per straight line method.**	The depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2014 are applicable to PSTCL. Remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets. The Commission directs PSTCL to prepare accounts accordingly.	There is no mention of changing of depreciation after 12 years from date of commercial operation by the utility over the balance useful life of assets in PSERC (Terms and Conditions for determination of Tariff) Regulations, 2005 which is applicable till FY 2016-17. The clause of 12 year criteria has been inserted in PSERC Regulations 2014 (terms and Conditions for determination of Generation, Transmission, wheeling and Retail supply Tariff Regulations i.e. MYT Regulations) which are applicable from the FY 2017-18. Therefore the criteria mentioned in the Directive will be applicable to PSTCL from FY 2017-18.	The depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2014 are applicable to PSTCL. Remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets. The Commission directs PSTCL to prepare accounts accordingly.

Sr. No.	Issues	PSERC's Comments/ Directives for FY 2016-17	PSTCL's Reply	PSERC Comments & Directives
			The action regarding charging of deprecation as per MYT regulations, 2014 in FY 2017-18 will be taken in due course of time.	
6.9	**Replacement of defective energy meters**	The Commission notes the progress regarding Boundary Metering. As the firms are to operate & maintain Boundary metering for 7 years after commissioning, therefore, it must be ensured that defective boundary meters are replaced within in stipulated time of maximum of ten working days. Regarding energy meters installed on 11 kV feeders emanating from 220 kV or 132 kV Sub-stations, PSTCL is directed to pursue with PSPCL to replace defective feeder meters within maximum of ten working days. PSTCL is again directed to keep full record of testing of defective energy meters in the ME labs. along with nature and duration of the fault. PSTCL was directed to check the multiplying factors of all energy meters at their Substations and submit report to the Commission within three months of issue of TO for FY2015-16, but no checking report has been supplied to the Commission. PSTCL is again directed to submit report positively within one month of issue of this Tariff Order.	The verification of CT/PT ratios at boundary metering points for the various PSTCL Sub-stations is again being carried out by P&M circle level Nodal officers, which is under process and the report shall be submitted to PSERC shortly.	The Commission notes with concern that despite directions in T.O. for FY 2015-16 and FY2016-17, PSTCL has failed to share even a single checking report regarding verification of Multiplying factors of 11 kV feeder meters or reasons for defective meters. The Commission reiterates its direction to PSTCL to ensure replacement of defective energy meters of 11 kV feeders within 10 working days and keep full record of nature of defects and their duration on real time basis. PSTCL is also directed to share the checking reports of multiplying factors of energy meters on its Substations with the Commission.

New Directive in Tariff Order for FY 2017-18

Sr. No.	Issue	Directive
6.10	Preventive maintenance of transmission lines	In order to avoid tripping of transmission/sub-transmission lines, PSTCL is directed to replace Disc Insulators with Anti-Fog Disc Insulators or to adopt hot line washing system for insulators, as adopted by PGCIL & some other states, to prevent tripping of transmission lines during foggy months. PSTCL is further directed to submit compliance report of the same to the Commission within one month of the issue of this tariff order.

Chapter 7
Determination of Transmission Charges and SLDC Charges

7.1 Annual Revenue Requirement

The Commission has determined the ARR for PSTCL for FY 2017-18 at ₹1234.87 crore, comprising of ₹1216.99 crore for Transmission business & ₹17.88 crore for SLDC business, for FY 2018-19 at ₹1283.86 crore, comprising of ₹1263.63 crore for Transmission business & ₹20.23 crore for SLDC business and for FY 2019-20 at ₹1337.15 crore, comprising of ₹1314.89 crore for Transmission business & ₹22.26 crore for SLDC business.

7.2 Determination of Transmission Tariff

7.2.1 PSERC MYT Regulations, 2014 specify that transmission tariff will have the following components:

i) SLDC Operation Charges

ii) Reactive Energy Charges

iii) Charges for use of network

7.2.2 The Commission has approved the ARR of SLDC business for FY 2017-18, FY 2018-19 and FY 2019-20 at ₹17.88 crore, ₹20.23 crore and ₹22.26 crore respectively in Table 5.26 of this Tariff Order. The transmission system capacity (net) projected by PSTCL forFY 2017-18, FY 2018-19 and FY 2019-20 are 13647.63 MW, 14660.21 MW and 15010.87 MW respectively. The Commission has determined the Transmission capacity (net) of PSTCL system from the data submitted by PSTCL as 12278.96 MW, 12500.78 MW and 12608.38 MW for FY 2017-18, FY 2018-19 and FY 2019-20 respectively in para 5.2. At present, there is only one distribution licensee (PSPCL) in the State of Punjab. Thus, whole of the SLDC charges determined by the Commission for the year will be borne by PSPCL during FY 2017-18, FY 2018-19 and FY 2019-20. The Commission has decided to work out the SLDC charges for FY 2017-18 only.The SLDC charges works out to ₹1.49 crore per month for FY 2017-18. **The Commission approves SLDC charges @ ₹1.49 crore per month for FY 2017-18 for PSPCL and for Long Term/Medium Term Open Access Customers @ ₹1213/MW/month for FY 2017-18, of the contracted capacity for the period.**

7.2.3 As provided in Regulation 24(2)(c) of the Open Access Regulations, 2011, Short

Term Open Access customers shall pay to the SLDC, composite operating charge at the rate of ₹2000 per day or part of the day for each transaction.

7.2.4 The reactive energy charges raised by NRLDC on PSTCL will be directly recoverable by PSTCL from PSPCL.

7.2.5 The ARR forTransmission Business of PSTCL has been determined at ₹1216.99 crore, ₹1263.63 crore and ₹1314.89 crore for FY 2017-18, FY 2018-19 and FY 2019-20respectively as shown in Table 5.25 of this Tariff Order. However, the Commission has decided to work out the transmission charges for FY 2017-18 only.

At present, there is only one Distribution Licensee (PSPCL) in the State of Punjab. Thus, whole of the transmission charges of ₹1216.99crore will be borne by PSPCL during FY 2017-18, which works out to ₹101.42 crore per month.

The Commission approves the transmission charges @ ₹101.42 crore per month payable by PSPCL during FY 2017-18.

7.3 Determination of Open Access Transmission Charges

7.3.1 The Commission has determined the Transmission Charges of PSTCL for FY 2017-18 as ₹1216.99 crore in para 7.2.6.The Open Access Transmission Charges during FY 2017-18 as per the Open Access Regulations notified by the Commission are computed in Table 7.1.

Table 7.1: Long-term and Medium-term Open Access Transmission Charges for FY 2017-18

Sr. No.	Particulars	Quantum
I	II	III
1.	Annual Revenue Requirement (ARR) for FY 2017-18(₹ crore)	1216.99
2.	Transmission System Capacity (net)(MW)	12278.96
3.	Transmission Tariff (₹/MW/month)	82593
4.	Long Term and Medium Term Open Access Charges (₹/MW/Month) of the contracted capacity (same as above)	82593
5.	Transmission Charges based on 54772.50 MU of energy at transmission boundary for sale in the State, as approved in Table 5.7 of PSPCL Tariff Order for MYT Control Period from FY 2017-18 to FY 2019-20 (paise/kWh)	22

7.3.2 As per clause (2)(b) of Regulation 23 of the Open Access Regulations, 2011, full Open Access Transmission charges for Short-term Open Access will be levied, which works out to 22paise/kWh (20paise/kVAh) for FY 2017-18. For Long Term and Medium Term Open Access customers, these charges shall be ₹82593/MW/Month of the contracted capacity.

7.4 Date of Effect

The Commission in its Order dated 29.03.2017 in Petition No. 89 of 2016 ordered that the charges as approved in the Tariff Order dated 27.07.2016 for PSTCL for FY 2016-17 are to be levied w.e.f. 01.04.2017 till the date of issue of order on the ARR filed by PSTCL for MYT Control Period from FY 2017-18 to FY 2019-20.

The Commission notes that the ARR Petition of PSTCL for FY 2017-18 covers the complete financial year. The recovery of Transmission Charges and SLDC Charges, therefore, has to be such that the total revenue requirement of PSTCL for FY 2017-18 is recovered in this period.

The Commission, therefore, decides to make the Transmission Charges and SLDC Charges determined above applicable from April 01, 2017 and these charges determined above shall remain operative till March 31, 2018.

This Order is signed and issued by the Punjab State Electricity Regulatory Commission on this, the 23rd day of October, 2017.

Date: October 23, 2017

Place: CHANDIGARH

Sd/-	**Sd/-**	**Sd/-**
(Anjuli Chandra)	**(S.S. Sarna)**	**(Kusumjit Sidhu)**
MEMBER	**MEMBER**	**CHAIRPERSON**

Certified

Sd/-

Secretary
Punjab State Electricity Regulatory Commission,
Chandigarh

ANNEXURE - I

LIST OF OBJECTORS

Objection No.	Name & address of Objector
1	Sh. P.P.Singh, Vice President (E&U), M/s Nahar Fibres (Pro. Nahar Spinning Mills Ltd.), 373, Industrial Area-A, Ludhiana
2	Sh. H.S.Sandhu, V.P. (Works), Mawana Sugars Limited, Unit: Siel Chemical Complex, Charatrampur, Village Khadauli/Sardargarh, Post Box No.52, Rajpura, Distt. Patiala (Pb).
3	General Secretary, PSEB Engineers' Association (Regd.), 45, Ranjit Bagh, Near Modi Mandir, Passey Road, Patiala
4	Govt. of Punjab, Department of Power, Chandigarh.

ANNEXURE - II

OBJECTIONS - PSTCL

Objection No. 1: Sh.P.P.Singh, Vice President (E&U), M/s Nahar Fibres (Pro. Nahar Spinning Mills Ltd.), Industrial Area-A, Ludhiana.

Issue No.1: APTEL Order dated 14.01.2016:
PSTCL filed an Appeal bearing No 262 of 2014 in APTEL challenging the determination of the Annual Revenue Requirement for 2014-15, revised estimates for 2013-14, True up for 2010-11 and 2011-12 issued by the Commission and also challenging the disallowance of some part of Minimum alternate tax on the following counts:
(i) Expenditure, in the true up proceedings of Operation and Maintenance Expenses (O&M) for the FY 2010-11 and FY 2011-12:
(ii) Tax on income:
(iii) Additional Capitalization Employees Cost on New Installations:
(iv) Depreciation on additional installation:
(v) Interest on Loan:
(vi) Projected investment plan for Transmission Business:
(vii) Grossing up of Carrying Cost:
(viii) Progressive Funding of unfunded past liability:
(ix) Pass through of entire Minimum Alternate Tax (MAT):
(x) Calculation of Interest on working capital @ 6.75% instead of SBI base rate:

APTEL vide order dated 14-1-2016, has decided all the issues except the last i.e. (x) against the PSTCL. Same issues also relate to the present MYT ARR under consideration. The decision of the APTEL on the issues be kept in view while deciding the present ARR.
Reply of PSTCL:
Hon'ble APTEL vide Judgment dated January 14, 2016 has upheld the decision of the Hon'ble Commission. PSTCL has filed a Second Appeal before Hon'ble Supreme Court in Civil Appeal No. 3202 of 2016, which is pending for disposal. Hon'ble Commission may take appropriate view on this for disposal of the Present Petition.
View of the Commission:
The Commission determines ARR after considering the APTEL judgment and in line with PSERC Tariff Regulations and Electricity Act, 2003.

Issue No.2: Return on Equity:
The Hon'ble Commission has approved 15.5% Return on Equity for 2010-11 to 2015-16 purportedly as per PSERC Regulations. As per the FRP approved by GoP, the cost of assets has been increased by their revaluation and merging the Consumer Contribution, Subsidies and Grants with GoP equity leading to increase in the equity share capital of PSTCL from ₹328.50 Crore to ₹605.88 Crore. Accordingly, RoE has been increased from ₹45.99 Crore to ₹93.91 Crore, without any fresh investment or infusion of cash by GoP or PSTCL. Similar is the case of PSPCL where the equity base has been increased from ₹2617.61 Crore to ₹6081.43 Crore which has led to increase of RoE from ₹405.73 Crore to ₹942.62 Crore i.e. an increase of 232%. Hon'ble Tribunal has already directed PSERC to reconsider the issue vide judgment Dated 17-12-14 in Appeal No 168 and 142 of 2013 as under:-
"48. ----- We direct the State Commission to adjust the excess amount of RoE in the impugned order from the FY 2011-12 onwards in the ARR/ True up for the year to provide relief to the consumers."

"Issue No. (iii) Relating to Return on Equity, Consumers Contributions, Grants, and Subsidies etc.

50.3 The findings of this Tribunal in Appeal no. 46 of 2014 shall squarely apply to the present case. The State Commission shall re-determine the RoE as per our directions and the excess amount *allowed to the distribution licensee with carrying cost shall be adjusted in the next ARR of the respondent no.2.*

As the PSPCL has filed Appeal in Supreme Court and GoP is also a party in this Appeal where the orders of APTEL is under stay, we request the Commission to record our objection on the issue and the tariff orders from 2011-12 will be subject to review as per the orders of the Supreme court.

Reply of PSTCL:

Hon'ble Supreme Court has stayed the impugned APTEL Judgment, the impact of the same may not be considered in the present Petition.

View of the Commission:

The Commission has considered Return on Equity as per PSERC Tariff Regulations, 2005 and as per Order of the Hon'ble Supreme Court.

Issue No.3: Transmission Losses:

PSPCL and PSTCL were constituted in 4/2010 as successor companies to PSEB and since then Transmission losses are being assumed as 2.5% on notional basis. It is strange that Boundary metering between generators/CTU & PSTCL on one side and PSTCL & PSPCL on the other side has not been commissioned till date though a period of almost 7 years has passed. It was stated in the ARR for the year 2016-17 that metering system was operated for June and July 2015 when the Transmission Losses were worked out as 2.19% and 2.88% respectively as per para 5.5.2 of ARR. It was further stated that the work was at stand still due to some issues with system integrator. Hon'ble Commission ordered on the issue in the tariff order at Page 99 as under:-

"The Commission notes with concern that the Boundary Metering Project, which was to be commissioned in July, 2013, has still not been operationalised and data of transmission losses could only be generated for June and July, 2015. The Commission directs PSTCL to ensure submission of data of transmission losses w.e.f. July 2016 regularly on monthly basis and any further slippage shall invite punitive action."

Now again in the MYT ARR submitted, the PSTCL has stated that tentative loss level estimated for Aug 2016 thro' remote connectivity, CMRI and manual reports is 2.76% and has committed to make the boundary metering operational by Nov 2016. However, it is not known whether the boundary metering has been made operational or not.

Para 4.6 of Business Plan indicates that Boundary metering has been completed but it has two phases. Whereas 1st phase has been nearing completion, 2nd phase will follow. However, by what time the verified and validated transmission losses for the state will be made available have not been committed and only sample readings for 2 months are being stated.

This is giving leverage to both PSPCL and PSTCL to adjust the losses in their own way and transferring the burden to consumers. PSTCL has proposed Transmission losses as 2.9% for RE of 2016-17 which is not at all understandable. Therefore PSTCL should declare the boundary metering commissioned immediately and the Transmission Loss trajectory of PSTCL for next 5 years be declared in the TO 2017-18.on the basis of 2.5% losses being taken by the Commission till date.

The comparison of the Transmission losses with other states cannot form basis for fixing base line loss for the state. Further the spread of transmission system, generators and load centres in the state, energy variation during the day and over the 12 months, over/under capacity set up for the system, reactor/capacitor capacity and voltage levels being handled by the STU will vary from state to state and so will be the transmission losses. Therefore, PSTCL needs to commission the system expeditiously and submit the data on monthly basis.

Reply of PSTCL:

PSTCL is in the process of collecting and validating the data for computing the Transmission loss through remote connectivity. It is expected that data from all the boundary meters shall be available through remote connectivity after rectifying all the field related problems. However, PSTCL in its Petition has projected the transmission loss trajectory for MYT Control Period based on the latest actual figure available of 2.76% for August, 2016. PSTCL has projected the transmission losses of 2.80% for FY 2016-17, 2.60% for FY 2017-18 and 2.50% for FY 2018-19.

View of the Commission:
Refer to Directive No.6.1 & para 5.4 of this Tariff Order.

Issue No. 4: Details of Substations:
PSTCL has been carrying out / proposed conversion of 132 KV sub stations to 220 KV. Consequently no. of bays for 220 KV should increase and those of 132 KV should decrease. However, the data does not support this as brought out below:

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Addition of 220 KV S/Stns	5	1	6	6	2	0
Reduction of 132 KV S/stns	(-) 2	(-) 1	(-) 3	(-) 5	0	0
Addition of 220 KV Bays	46	NA	39	14	16	4
Reduction of 132 KV Bays	4	NA	4	0	0	0

Thus whereas 11 No 132 KV sub stations have been converted to 220 KV, there is no reduction in 132 KV bays. There is no explanation available for this and its impact on ARR has not been brought out.
Reply of PSTCL:
The increase in 220kV bays and corresponding decrease in 132kV bays on upgradation of 132kV S/s to 220kV S/S does not bear a direct relationship. Sometimes a 220/132 kV transformer is installed while U/G a 132 kV S/S and 132 kV bays have to be retained. Moreover, at some other Sub Stations, 132 kV links are not delinked immediately to maintain backup supply links so as to improve reliability of the system.
View of the Commission:
The objector may note the response of PSTCL.

Issue No. 5: Contracted Capacity of PSPCL Viz Transmission capacity of PSTCL
The total contracted capacity of PSPCL as on 31.3.15 was 10288 MW including own plants, CGS and IPPs (ARR Vol 1) which has increased to 13583 MW as on 31.8.16 as per data on website of SLDC, Ablowal. Peak demand served in Punjab as per CEA data during Aug 2016 is 11228 MW. The total transformation capacity of 220 and 132 KV which are the interface voltages for PSTCL supply as per business plan of PSTCL ending 31.3.16 is 28209 MVA after which 3 new substations have been added. As such the transformation capacity is about 2.2 times the peak demand. Any further expansion of the system should be based on load flow studies and cost benefit analysis as the cost is ultimately to be borne by the consumers.
Reply of PSTCL:
The actual demand in August 2016 was 11228 MW as per CEA data. The total substation capacity for PSTCL (as per Table 30 of MYT Petition) as on April 1, 2016 was 30,599 MVA. The mere comparison of peak demand with total substation capacity would not be prudent, since the substation capacity includes the addition of capacity of substation for all voltage levels, not at interface voltage levels. PSTCL submits that it undertakes the planning of the intra-State Transmission System based on Planning Criteria and Planning philosophy specified in PSERC (State Grid Code) Regulations 2013 and Transmission Planning Criteria stipulated by Central Electricity Authority, 2013. The planning has been undertaken after load flow studies of the transmission system. The proposed schemes have been reviewed regularly to cope up with the changing system requirement such as line loading, substation loading, n-1 criterion, loading on inter-state lines etc.
View of the Commission:
The objector may note the response of PSTCL.

Issue No.6: Auditors Reports:
The Annexure 1 of the Independent Auditors Report ending 31.3.15 brings out the amounts worth Crore of Rupees which are to be authenticated by PSTCL/remain un-reconciled and the auditor has expressed its inability to assess their impact on the Profit and Loss statement. How the utility has proposed True Up based on such unauthenticated accounts is not understandable.

Reply of PSTCL:

PSTCL has claimed the True-up for FY 2014-15 based on Audited account as per the provisions of the PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, and its subsequent amendments thereof. PSTCL has also submitted CAG report for FY 2014-15 for consideration of the Hon'ble Commission.

View of the Commission:

The concern of the Objector has been suitably attended to by PSTCL.

Issue No. 7: True up for FY 2015-16:

PSTCL has failed to submit audited accounts of 2015-16 for true up exercise in the present MYT ARR which is a clear violation of Regulation 12 of PSERC MYT Regulations 2014 which requires the Licensee to submit CAG audited accounts of last year for True Up and also against the terms of the License. The delay in compiling the audited data for the previous years is proving disastrous for the consumers in both the scenarios. If the actual / admissible expenses during true up are more, then consumer has to bear the carrying cost of Revenue Gap for 2 years and if the actual/admissible expenses are less, then consumer gets the relief after 2 years and in the meanwhile suffers due to high production costs resulting from higher tariff. MYT Regulation 12.6 provide as under:-

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:

Moreover, the Regulations/ Electricity Act 2003 do not permit such laxity and APTEL has already held in OP No 1 that suo-motu proceedings be started where the utility fails to present its case. As such PSERC may initiate action against the utility for willful and continuous violation of regulations and the Act and carrying cost of gap should be disallowed.

Reply of PSTCL:

PSTCL in its Petition submitted that it has filed an Interim application dated September 8, 2016 along with Review Petition on Tariff Order for FY 2016-17 dated July 26, 2016, seeking clarifications with regard to the adjustment of past revenue gaps/surplus. The Hon'ble Commission has issued its Order on November 21, 2016 on the Interim Application filed by PSTCL. It had not been possible on the part of the PSTCL to complete the audit of accounts of FY 2015-16 and file the same with the Hon'ble Commission for True-up by November 30, 2016. However, the Audited Accounts for FY 2015-16 has been finalised and the same has been submitted to Hon'ble Commission for consideration for the disposal of the present Petition.

View of the Commission:

Refer to Commission's Directive No. 6.5

Issue No. 8: 400 kV Substation, Dhuri:

One No 400/220 KV transformer at 400 KV Sub Station, Dhuri remained out for a considerably long period. It is not disclosed that Transmission System availability considered that outage or not.

Reply of PSTCL:

PSTCL has computed the Transmission System Availability as per the provision of the PSERC Regulations.

View of the Commission:

The objector may note the response of PSTCL. Transmission System availability factor (in percent) is computed in accordance with PSERC/CERC Regulations.

Issue No.9: Energy Requirements:

Energy requirement of the state projected by PSTCL Business Plan differs widely from the projection given by PSPCL Vol.1 Part 2 brought out as under:

(in MUs)	2017-18	2018-19	2019-20
As per PSTCL	61215	66483	70899
As per PSPCL	55824	58300	60900
Excess in MUs	5391	8183	9999
Excess in %	9.66%	14.04%	16.42%

PSTCL projections are higher by 10% to 16% and the transmission system designed for any over capacity will be loaded on to the consumers. Therefore, projections and consequent capital investment plan needs to be reviewed by the Commission.

Reply of PSTCL:

PSTCL transmission network caters to the demand of its transmission system users, which primarily includes demand of PSPCL and demand of Open Access consumers. In order to meet this growing demand, a reliable, adequate and robust transmission network is required. PSTCL in its Business Plan submitted the projection energy requirement based on input received from PSPCL at the time of filing of Business Plan and Capital Investment Plan Petition.

PSTCL in its Capital Investment Plan Petition had submitted that the operational and system constraints are analysed based on the loading during the paddy season and some fine-tuning of proposed works for the Control Period would be carried out after analysing the loading during paddy seasons in 2016. Accordingly, PSTCL had submitted the revised proposed works on September 26, 2016, keeping in view the actual maximum demand & system constraints witnessed during the current year.

View of the Commission:

The Commission agrees with the reply of PSTCL.

Issue No.10: Equity Base:

Equity base for the purpose of RoE has been taken as ₹605.88 Crore on 1.4.2017 and closing balance on 31.3.2020 as ₹822.27 Crore. However in the business plan, it has been shown as ₹1011.05 Crore for the control period. The figures may be reconciled.

Reply of PSTCL:

At the time of filing the Business Plan Petition, based on ARR Petition for FY 2016-17, the audited accounts for FY 2014-15 were not available. However, the present MYT Petition was filed based on provisional values of FY 2015-16 as baseline values for projecting the ARR for the MYT Control Period from FY 2017-18 to FY 2019-20. Hence, there is difference in Opening balance of Equity.

View of the Commission:

The concern of the Objector has been suitably attended to by PSTCL.

Objection No.2: Sh.H.S.Sandhu, V.P. (Works), Mawana Sugars Limited, Unit: Siel Chemical Complex, Charatrampur, Village Khadauli/Sardargarh, Post Box No.52, Rajpura, Distt. Patiala (Pb).

Issue No. 1: APTEL Order dated 14.01.2016:

Refer Issue No.1 of Objection No.1

Reply of PSTCL:

Refer reply against issue No.1 of Objection No.1.

View of the Commission:

Refer to Views of the Commission on Issue No.1 of Objection No.1

Issue No.2: Return of Equity:

Refer Issue No.2 of Objection No.1

Reply of PSTCL:

Refer reply against Issue No.2 of Objection No.1.

View of the Commission:

Refer to Views of the Commission on Issue No.2 of Objection No.1 above.

Issue No. 3: Transmission Losses:

Refer Issue No.3 of Objection No.1.

Reply of PSTCL:

Refer reply against Issue No.3 of Objection No.1

View of the Commission:
Refer to Views of the Commission on Issue No. 3 of Objection No.1 above.

Issue No. 4: Income from Open Access:
ARR of PSTCL, NIL income from open access (Transmission Charges for PSTCL and Scheduling charges etc for SLDC as well as NOC charges) has been taken for H2 of 2016-17 under Non-Tariff Income.
It may be pointed out here that as per data available on SLDC web site, 8 generating stations/consumers have valid consent for wheeling of power within state out of which 2 generators/consumers have MTOA consent. Further, 117 No consumers have consent for short term open access as on date. It is evident that both PSTCL and SLDC are earning revenue from MTOA customers and other short term transactions in spite of imposition of additional surcharge and the expected earnings on notional basis need to be accounted for in the ARR which can always be trued up.
Non consideration of open access charges in the respective tariff orders on account of being infirm income has resulted in additional liability of Income Tax in the respective years and resulted in higher revenue requirement in the true up which is ultimately passed on to the consumers in the shape of higher tariff. It is therefore requested that appropriate income from open access charges for PSPCL and PSTCL need to be made in the tariff orders.
Reply of PSTCL:
PSTCL in its Petition has considered the Non-tariff Income for FY 2016-17 based on actual of H1 and estimated values for H2 of FY 2016-17. PSTCL has projected the Non-tariff income of ₹ 39.04 Crore which is in line with income of ₹ 47.77 Crore approved by the Hon'ble Commission in Tariff Order for FY 2016-17. The actual income whichever will be accrued in H2 of FY 2016-17 shall be considered at time of True-up.
View of the Commission:
The Commission has considered income from Open Access Charges for PSTCL for FY 2016-17 revised under the head Non-Tariff Income.

Issue No. 5: True up for FY 2015-16:
Refer Issue No.7 of Objection No.1 above.
Reply of PSTCL:
Refer reply of PSTCL against Issue No.7 of Objection No.1 above.
View of the Commission:
Refer to the view of the Commission against Issue No.7 of Objection No.1 above.

Issue No. 6: Reserves & Surplus:
As per Balance Sheet for 2014-15, PSTCL has Reserves and Surplusof ₹ 2261.82 Crore and Equity of ₹ 605.88 Crore which works out to 3.75 times the equity amount. Consumers are being made to pay 15.5% RoE on the equity amount whereas Reserves and surplus are not earning any revenue for PSTCL or the consumers. Therefore, PSTCL should explore liquidation of some portion of equity back to GoP so that the burden of ROE is reduced and Tariffs could be lowered.
Reply of PSTCL:
ROE has been claimed as per the PSERC Regulations.
View of the Commission:
The Commission has considered Return on Equity as per PSERC Tariff Regulations, and as per Order of the Hon'ble Supreme Court.

Issue No. 7: Capital Expenditure for MYT period:
PSTCL has proposed Capital Expenditure of ₹381.50 Crore, ₹252.61 Crore. and ₹155.33 Crore. in 2017-18, 2018-19 and 2019-20 respectively. PSTCL already has transformation capacity of 29495 MVA at 220 and 132 KV levels against contracted Long Term generation capacity plus own generating plants of PSPCL as only 13583 MW. Peak demand served by PSPCL last paddy is 11288 MW out of which some load directly connected to Power Plant Switchyards was served on the

generation voltages as well. In view of huge transformation capacity compared with peak demand being about 2.6 times, the Capital Investment Plan needs to be reviewed critically as the assets created will require revenue but nay not put to efficient and productive usage.

Reply of PSTCL:

The actual demand in August 2016 was 11228 MW as per CEA data. The total substation capacity for PSTCL as on April 1st, 2016 was 30,599 MVA. The mere comparison of peak demand with total substation capacity would not be prudent, since the substation capacity includes the addition of capacity of substation for all voltage levels, not at interface voltage levels. PSTCL submits that it undertakes the planning of the intra-State Transmission System based on Planning Criteria and Planning philosophy specified in PSERC (State Grid Code) Regulations 2013 and Transmission Planning Criteria stipulated by Central Electricity Authority, 2013. The planning has been undertaken after load flow studies of the transmission system. The proposed schemes have been reviewed regularly to cope up with the changing system requirement such as line loading, substation loading, n-1 criterion, loading on inter-state lines etc.

View of the Commission:

The objector may note the response of PSTCL and refer para 5.8 of this tariff order.

Issue No. 8: Energy Requirement for MYT period:

Refer Issue No.9 of Objection No.1 above.

Reply of PSTCL:

Refer reply of PSTCL against Issue No.9 of Objection No.1 above.

View of the Commission:

Refer to Views of the Commission on Issue No.9 of Objection No.1 above.

Issue No. 9: Equity Base for MYT period:

PSTCL has proposed increase in equity base for the MYT period from present ₹605.88 Crore to ₹1011.05 Crore as per business plan. We strongly oppose any increase in equity base as it is expensive proposition compared with raising loans.

Lastly, we request the Hon'ble Commission to allow us to have the privilege for submitting any additional observation/comment at a later date and at the time of hearing. We further request for giving a chance to elaborate our points during public hearing.

Reply of PSTCL:

PSTCL strongly denies the contention of the Objector that increase in equity should not allowed as it is expensive compared to raising of loans. PSERC MYT Regulations, 2014 specifies the normative debt equity ratio of 70:30. PSTCL has considered the equity amount not exceeding 30% of the capital expenditure considered for previous year. Further, for funding of capital expenditure for new projects, loans are available from the Bank/Financial Institution to a certain limit. Beyond that, PSTCL has to infuse internal accruals for execution of such projects and such internal accruals are reckoned as equity.

View of the Commission:

The Commission has considered Return on Equity as per PSERC Tariff Regulations, and as per Order of the Hon’ble Supreme Court.

Objection No. 3: General Secretary, PSEB Engineers’ Association (Regd.),Ranjit Bagh, Near Modi Mandir, Passey Road, Patiala.

Section-I: (PART -1: True up 2014-15)

Issue No. 1: Number of 66 kV Bays:

The data of number of 66 kV bays is shown as NIL in ARR. Figures may be provided.

Reply of PSTCL:

Number of 66 kV bays may be read as 890 no.

View of the Commission:

The objector may note the response of PSTCL. The information may also be supplied by PSTCL to the Objector under intimation to the Commission.

Issue No. 2: Solar/NRSE Generation Capacity:

Generation Capacity MW figures of Solar/NRSE capacity may be indicated separately.

Reply of PSTCL:

Generation capacity MW figures of Solar/NRSE capacity is 484 MW (gross).

View of the Commission:

The objector may note the response of PSTCL. The information may also be supplied by PSTCL to the Objector under intimation to the Commission.

Issue No. 3: Load Flow Studies & Transmission Losses:

A load flow study may be carried out for 2014-15 conditions which will give the loss figures as a part of programme

Load flow study is a regular ongoing exercise which can be carried out not only for planning and augmentation purposes, but also for study of operational problems caused by live outages etc.

Reply of PSTCL:

Load flow studies in SLDC are being carried out to ascertain the stability of system with the outage of particular transmission element and for calculation of ATC/TTC limit of PSTCL Transmission Network. These studies are not meant for calculation of Transmission losses. Through load flow study, transmission losses can only be worked out for a particular moment/loading scenario where as losses throughout the year vary depending upon loading conditions of the Transmission Network.

View of the Commission:

The Commission agrees with the reply of PSTCL.

Issue No. 4: Details of outsourced employees:

Details / Particulars of outsourced employees may be given, viz

a) Number of outsourced personnel
b) Annual cost
c) Head to which the cost is booked.

Reply of PSTCL:

a) Number of outsourced personnel are 1154 No. including 892 No. security personnel as on 31.03.2015
b) Annual cost is ₹ 17.68 crore
c) The cost is booked under the Head Administrative and General expenses 76.197.

View of the Commission:

The information may be supplied by PSTCL to the Objector under intimation to the Commission.

Issue No. 5: Major Items of commissioned Assets:

Assets of ₹1483.85 Crore were commissioned in 2014-15.

Major items of assets commissioned may be indicated, viz

Lines of 400 kV or 220 kV

T/Fs of 100 MVA or above.

Reply of PSTCL:

The details of the transmission lines and power transformers commissioned during FY 2014 -15 have been supplied.

View of the Commission:

The information may be supplied by PSTCL to the Objector under intimation to the Commission.

Issue No. 6: Availability of Transmission capacity:

Availability of July 2014 was lower as compared to other months, which implies some major / prolonged breakdown of line or transformer.

The particulars of such major breakdown may be supplied.

Reply of PSTCL:

The information has been supplied.

View of the Commission:
The information may be supplied by PSTCL to the Objector under intimation to the Commission.

Issue No. 7: Carrying Cost recoverable from Govt. of Punjab.
The PSERC tariff order for 2014-15 Para 6.14 stipulates that ₹39.05 Crore, carrying cost, is to be paid by Govt. of Punjab. This amount may be recovered from Govt. of Punjab and may not be recovered through ARR, as the matter stands decided by PSERC.
Reply of PSTCL:
Carrying cost is not being recovered through ARR.
View of the Commission:
The Commission agrees with the reply of PSTCL.

Section-I (PART-2: Review of 2016-17)

Issue No. 8: Addition of Substations viz new 66 kV bays:
The augmentation/new Sub Stations data in ARR shows:

New Substations	400 kV =1
	220 kV = 6
Sub Station capacity	3170 MVA

However, number of 66 kV bays increased are only 8 numbers.
The extra MVA capacity added at 400/220 kV and 220/66 kV may be clarified.
To deliver the power from new assets to PSPCL, the key element is 66 kV bays. It is estimated that 20 to 30 numbers of 66 kV bays should have been commissioned to transmit/ deliver the power to PSPCL system, otherwise the additional 3170 MVA Transformer capacity would remain unutilized.
Reply of PSTCL:
The extra MVA capacity added/to be added during FY 2016-17 is 2x500 MVA at 400/220 KV level and 1420 MVA at 220 KV level. Out of total MVA capacity added at 220 KV level, 200MVA is at 220/132 KV level which does not call for additional 66 KV bays for power dispersal to PSPCL. Moreover, most of the 220 KV Sub-Stations are created by upgradation of existing 66 KV or 132 KV substations and the existing 66 KV bays at such Sub-Stations are utilized for power dispersal. Accordingly, there is no direct co-relation between the MVA Capacity added and the 66 KV bays planned for the same.
View of the Commission:
The Commission is not fully convinced with reply of PSTCL. The complete details of upgradation of existing 66 kV Sub Stations be supplied to the Objector as well as to the Commission.

Issue No. 9: Load flow studies:
Load flow study may be carried out as per actual loading conditions of 2016-17, which would give an accurate figure of losses.
Even if, boundary metering system is not complete, the percentage losses can be calculated as per loading conditions of study.
Reply of PSTCL:
Through load flow study, transmission losses can only be worked out for a particular moment /loading scenario where as losses throughout the year vary depending upon loading conditions of the Transmission Network.
Further, Boundary Metering Project stands commissioned as far as evaluation of transmission losses is concerned. The transmission losses are being worked out regularly since July–2016 as detailed below:

Month	Transmission losses
Jul-2016	3.57%
Aug-2016	2.76%
Sep-2016	4.09%
Oct-2016	4.16%
Nov-2016	4.58%
Dec-2016	7.09%

The actual transmission losses of subsequent months shall be also be available from the Boundary Metering System.
(PSTCL has supplied the revised transmission losses for July and August, 2016 as 2.37% and 3.58% instead of 3.57% and 2.76%, respectively to the Commission).
View of the Commission:
The revised data should be supplied to the Objector by PSTCL under intimation to the Commission.

Section-I (PART -3: MYT Tariff 2017-18 to 2019-20)

Issue No. 10 & 11 Transmission System & Transmission Losses.

Transmission system details for 2017-18 to 2019-20 shows that number of new 66 kV bays is not adequate or commensurate with increase in substation capacity, as under:

Sr. No.	S/S Particulars	ARR Period		
		FY 2017-18	FY 2018-19	FY 2019-20
1.	S/Station MVA	1934	2188	740
2.	66 kV Bays	9	3	0

While substation capacity added is 4862 MVA, the 66 kV bays added are only 12. PSTCL may give the split up of substation capacity added, viz
a) 400/220 kV T/Fs MVA
b) 220/66 kV Transformer MVA
As per information, the only addition in 400 kV class is 500 MVA transformers at Nakodar. Thus out of 4862 MVA capacity added, 4362 MVA capacity would be at 220 kV level. This is mostly to be supplied to Powercom by stepping down to 66 kV.
Transco may review and coordinate with Powercom.
Issue No. 10.1 Transco augmentation vis-a-vis generation capacity.
The Augmentation and Generation Capacity data from FY 2016-17 to FY 2019-20 in the ARR is as under:

Sr. No.	Generator/Sector	Capacity addition			
		2016-17	2017-18	2018-19	2019-20
1.	Central Sector	4261	4223	4460	4574
2.	Pvt. IPPs	3653	3653	3653	3653
3.	NRSE	911	1220	1996	2234

From this data, the capacity addition between 2016-17 and FY 2019-20 will be

		MW addition
1.	Pvt. IPPs	NIL
2.	C/Sector Share	313
3.	NRSE	1323

Issue No.10.2: NRSE Capacity Addition:
While NRSE capacity addition would be mostly at 66 kV or below, the capacity addition to be handled by Transco would be the Central sector 313 MW. The capacity addition shown in table 54 would be utilized, presumably, to eliminate overloading and to provide margin against outages.
Issue No.10.3: Overloaded 220 kV/400 kV Network
Transco may indicate whether there would be any overloaded 220 kV or 400 kV line or power transformer of 220 kV or 400 kV class as on 31/3/2018, 31/3/2019, 31/3/2020 since NRSE capacity addition at 66 kV or lower would give relief (reduction) of loading on 220 kV system or 400 kV system.

Issue No.11: Transmission Losses:
For 2017-18 to 2019-2020, the only way of assessment of transmission losses is through load flow

study with loading simulated as per anticipated load growth data to be supplied by PSPCL.

Reply of PSTCL to Issue No. 10 &11:

Out of total MVA capacity of 4862 MVA, during FY 2017-2020, 1500 MVA (2x500 MVA, for 400 KV Grid Dhanansu near Doraha+1x500 MVA the balance capacity of 400 KV Rajpura) shall be added at 400 KV level and remaining is going to be added at 220 KV level. Therefore, provision of suitable 66 KV bays have already been made accordingly. In case any further requirement of 66 KV bays comes at a later stage from PSPCL, adequate provision have been made in the planning list of FY 2017-20. PSTCL Transmission System have been planned on the basis of load projection figures of EPS 18th report of Central Electricity Authority. Load flow study has been carried out for FY 2017-22 system conditions, and has been checked for 31.03.2018, 31.03.2019 & 31.03.2020 anticipated loadings. No overloading have been seen on 400 KV, 220 KV or 132 KV system.

View of the Commission:

The objector may note the response of PSTCL and Para 5.4 of this Tariff Order. Also refer to Commission's Directive No.6.1.

Issue No. 12: Employee Strength:

While the transmission system is expanding in 3 years period the sanctioned strength of employees remains constant at 5064. The increase in transmission system over 3 year period is given in Table 54.

Additions	
400 kV lines	44.4 km
220 kV lines	672.54 km
400 kV substation	1
220 kV substation	8
400 kV Bays	4
220 kV Bays	34

Substation capacity 4862 MVA

Reply of PSTCL:

PSTCL is praying the Hon'ble Commission to allow actual employee cost. PSTCL is in the process of recruiting new personnel which will be required as per the finalized norms.

View of the Commission:

Employee cost is allowed as O&M expenses as laid down under Regulation-26 of PSERC (Terms and Conditions of Generation, transmission, wheeling and Retail Supply Tariff) Regulations, 2014.

Issue No. 13: O&M Cost and interest on loans:

The following components of ARR are tabulated as percentage of total ARR (transmission business)

i) O&M i.e. employee cost + R&M +A&G

ii) Interest on loan

Sr. No.	**Particular**	**---------------Period of ARR------------------**		
		20**17-18**	**2018-19**	**2019-20**
1.	Net ARR	1491	1551	1610 Crore
2.	O&M	39.5	39.8	40.4%
3.	Interest on loan	27.3	26.1	24.9%

ARR petition of PSTCL for control period may be allowed as prayed.

Reply of PSTCL:

No comments required.

View of the Commission:

O&M expenses are allowed under Regulation-26 and interest on loan under Regulation-24 of PSERC (Terms and Conditions of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2014.

(Section-II of Objection No.3 of PSEB Engineers' Association, Patiala)
Part-1 Business Plan, Transco Petition No. 45 of 2016.

Issue No. 1: Proposed generation capacity addition & future load forecasts of the state

1. The PSERC MYT Regulation 2014 states that Business Plan shall be based on proposed generation capacity addition and future load forecasts of the state.

1.1 Transco should provide copy of Powercom documents/ letter vide which it has supplied the following data covering the 3 years control period 17-18 to 19-20

a) Capacity addition, with expected dates

b) MU/ Year estimates of energy consumption

c) Peak MW estimates

1.2 In finalizing the business plan, Transco should have the complete details of overloaded lines and transformer of Transco system, so that the augmentation or new works to de-load the overloaded elements can be taken up on priority. In any scheme for augmentation to transmission network, the priority has to be given for overloaded elements / sections or lines.

1.3 Powercom should be required to supply list of substations, lines, or transformers of Transco (i.e. 132 kV and above) which results in load shedding during paddy season for sole reason of overloading of 132/220/400 kV system.

1.4 Powercom should be required to give the list of substation or Transco system transformers which are fully loaded or overloaded due to which the release of new connections or industrial connections etc is held up.

Reply of PSTCL:

Copies of the relevant Powercom documents for 1.1, 1.2, 1.3 & 1.4 have been supplied.

View of the Commission:

The objector may note the response of PSTCL. Also PSTCL should supply the complete details to the Objector under intimation to the Commission.

Issue No. 2: Specific instances of overloading:

Specific instances of overloading that need to be covered in Business Plan.

a) Case of 132 kV Shanan — Kangra— Pathankot double circuit lines. This line is over 60 years old and its conductor was required to be replaced. The position regarding replacement of conductor may be clarified.

b) Augmentation of BBMB 220 kV Bhakra Jamalpur double circuit line:-Bhakra Beas Management Board had carried out renovation, modernization and up rating of Bhakra Right Bank power house for 5x120 MW to "5x157 MW. Simultaneously it was proposed that the conductor of Bhakra Jamalpur 220 kV double circuit line be replaced / augmented on the same towers. The new conductor was procured by Bhakra Beas Management Board in 2007, but it has not been utilized for re-conductoring of Bhakra Jamalpur 220 kV line since 2007 and the conductor is lying unused at Jamalpur stores of Bhakra Beas Management Board.

Since the Jamalpur substation feeds Punjab areas exclusively, it was proposed that since BBMB has staff shortage and is not able to take up this work, the BBMB may give this job to PSTCL as a deposit estimate to be executed by PSTCL.

The position regarding replacement of conductor may be detailed by Transco, since the beneficiary would be Punjab, and since the cost would be borne by Bhakra Beas Management Board.

Reply of PSTCL:

a) Replacements of Conductor 132KV Shanan-Kangra-Pathankot Double Circuit Line:-

Survey work of this line has been completed. Route Plan for Shanan-Kangra Section has already been submitted to Deputy Chief Engineer, Transmission Design, PSTCL, Paitala for approval. AOR for stubbing, erection of new towers and stringing/sagging has also been submitted.

b) 220KV Bhakra Jamalpur Double Circuit Line (BBMB):

The work of replacement of conductor of this line is to be carried out as deposit work of

BBMB. This work is to be executed by PSTCL. Tender was called for this work but rates quoted by the contractors were higher than the approved rates of PSTCL. The case is pending with BBMB for finalization of the rates/contract.

View of the Commission:

The objector may note the response of PSTCL. The copy of survey report, action taken report and completion schedule, may be supplied to the Commission.

Issue No.3: Coordination with PGCIL/CTU.

Business Plan to ensure coordination with PGCIL/CTU.

The functions of State Transmission Utilities STU have been specified in Sec. 39 of the Electricity Act 2003 as under

39(2)(b)"To discharge all functions of planning and coordination relating to infra state transmission system with

i) CTU ii) State Govts. iii) Genco's iv) RPCs v) Central Electricity Authority vi) Licensees

39(2)(c**)**To ensure development of an efficient, coordinated and economical system of intra-State Transmission lines for smooth flow of electricity from a generating station to the load centres;"

3.1 Thus Transco (STU) must coordinate with PGCIL and Powercom, in this regard some important points of coordination need to be examined as they are not included in Business Plan.

Reply of PSTCL:

Based on the load flow study carried out by the PSTCL corresponding to FY 2017-2022 system conditions:-

i) Most of the power injection at 765 KV Agra shall flow to the grid station like 765 KV Jhattika, 765 KV Greater Noida, 765 KV Bulandshahar, 765 KV Fatehpur and 765 KV Bareli through 765/400 KV I.C.Ts provided at the grids.

ii) Hydel generations of Taprovan, Tehri (itself), Lohrinagpal, Koteshwer (Combined total as appx. 2130 MW) is likely to be pooled at Tehri pooling station, which shall further stepped up to 765 KV voltage level through 400/765 KV ICTs.

iii) Because of the available/likely to be available 765 KV Corridors' such as 765 KV Meerut-Bulandshahar, Meerut-Bareli(PG), Meerut-Aligarh, Meerut-Greater Noida, Meerut-Bhiwani as well as 765/400 KV ICT's of 765 KV grid Meerut Itself, there may not be the possibility to flow whole of the power to 765 KV Moga bus. As per the load flow study of 17-22, the Major portion of the power shall be dispersed in 765 KV network of U.P and only a small portion shall reach at 765 KV bus Moga via 765 KV Gurdaspur.

iv) 400 KV PGCIL Moga has installed capacity of (3x500+1 x315 MVA), 400/220 KV ICTs. There are six nos 220 KV outgoing circuits from 400 KV PGCIL Moga at present and another 2 ckts for 220 KV Mehal Kalan have also been planned. Furthermore, four circuits are of twin conductors, and thus making its total evacuation capacity of about 2650 MVA, which is quite adequate for power evacuation from PGCIL Moga.

View of the Commission:

The objector may note the response of PSTCL. The complete details may be supplied to the Objector, under intimation to the Commission.

Issue No.3.1 (A): 400 kV grid Sub Station Moga:

The 400kV substationMoga had been upgraded to 765 kV several years ago with the commissioning of 765kV ring Main of Delhi / NCR as under

i) Agra is receiving / pooling station which gets supply from WR (Agra Gwalior 765 kV), ER (Gaya-Fatehpur-Agra) and from North —East (BiswanathChariyali to Agra HVDC line, 800 kV 6000 MW).

ii) Meerut is receiving power from Tehri -The ring main of 765 kV is Agra- Jhattikara-Bhiwani-Meerut-Agra 765 kV Moga is connected

a) 765 kV Bhiwani-Moga

b) 765 kV Meerut-Moga

Moga has 2x1500 MVA transformers of 765/400 kV. Capacity being 3000 MVA

Since, Moga substation has been upgraded from 400 kV to 765 kV with the Commissioning of 765 kV Moga-Bhiwani line and 765 kV Moga Meerut line additional power injection upto 3000 MVA is possible from 765 kV Moga. It was necessary for PGCIL to have provided additional transmission from Moga to suitable load centre substation in Punjab so that out of 3000 MVA capacity, some portion can be dispersed and consumed in Punjab.

However, the 400 kV system of Transco is for transmission IPP (Talwandi Sabo and Rajpura) power and this system was not designed for 3000 MVA additional input from 765 kV Moga to 400 kV Moga.

Hence, Business plan of Transco should include the plan to evacuate additional 700 to 1000 MVA power from PGCIL Moga to a suitable load centre in Punjab.

Punjab (Powercom) is paying the additional transmission charges for 765 kV system of PGCIL connected to Moga, and is entitled to draw benefit from power injected from 765 kV Moga to 400 kV Moga. Since 400 kV system of Moga PGCIL is already fully loaded, STU (Transco) is required to coordinate with PGCIL so that Punjab can draw additional power from Moga corresponding to injection of power from 765 kV systems into Moga.

The 800 kV HVDC line from Biswanath Chariyalli to Agra has capacity to 6000 MW. This line is over 1200 km end with high capital cost, the transmission tariff would be loaded to beneficiary states in NR including Punjab. However, this additional power from North East is injected at Agra, and can be practically drawn/consumed by Punjab only through 765 kV Moga substation. In case we do not get additional transmission facility from Moga, Punjab will end up paying higher transmission charges for this HVDC line without getting proportional benefit from it.

Reply of PSTCL:

To draw additional power from 400kV substation Moga 220KV double circuit line from 400KV Moga to 220KV Mehalkalan is being constructed by PSTCL and shall be available by June, 2017.

PSTCL has prepared the present Capital Investment Plan after taking the necessary input from PSPCL and PGCIL. As per regular practice, PSTCL will execute the proposed schemes in coordination with PSPCL and PGCIL.

View of the Commission:

The objector may note the response of PSTCL. The complete details may be supplied to the Objector, under intimation to the Commission.

Issue No. : 3.1(B): 1280 km HVDS line from Eastern Region to Northern Region

The 1280 km HVDS line, 800 kV, capacity 3000 MW from Champa Pooling station (ER) to Kurukshetra (NR) was due to be commissioned in September, 2016. This line of high capital cost will put extra tariff burden on NR states who are to receive the ER power through this line. The Transco as STU PGCIL so that the transmission system is constructed from Kurukshetra to deliver the power to Punjab load centre. This is most essential otherwise Punjab may end up paying transmission tariff on account of this HVDC line, without getting benefit from it.

Reply of PSTCL:

400 KV connectivity from Kurukshetra to Punjab system i.e. 400 KV Kurukshetra—Malerkotla—Amritsar D/c line has already been approved under NRSS-XXXI-B and is being implemented under TBCB (Tariff Based Competitive Bidding).

View of the Commission:

The objector may note the response of PSTCL.

Issue No. 4: Planned Replacement of old assets:

Business plan for planned replacement of old assets. The transmission system of Transco is a mix of old assets commissioned in 1950's-1970's, 1980's and new assets commissioned in past 10 years. There is an urgent need to list out power transformers such as circuit breakers, CTs and PTs which are over 25 years old and utilizes over 35 years old, and execute a plan to (a) Assess the Residual life of such assets (b) to plan the replacement in an organized time frame.

4.1 A related aspect this issue of maintaining minimum level of spares/ equipment in case of failure of operating equipment. In case of certain assets like power transformers, in case a running asset fails, the time to procure a new transformer to replace the failed unit would be 1 year or more. A certain level of spares has to be maintained since possibility of failure of operating assets can never be completely ruled out.

In case of certain high value item like 315 MVA, 400/220 kV transformer, PGCIL has even adopted the scheme of truck mounted transformers which can be used as a spare to be used in any substation over a large area.

Transco can draw up a business plan identifying the spares that are necessary so that there is minimum disruption of supply in case a running unit fails.

4.2 Transco may give details of spare equipment presently being maintained and business plan for future covering items, such as power transformers, circuit breakers CTs PTs etc.

Reply of PSTCL:

In PSTCL's Transmission system, most of the 132 KV Grids have both 132/66 KV as well as 132/11 Transformers for feeding the associated 66 KV grids and 132/11 KV loads.

a) Thus 132 KV grid which are upgraded to 220 KV with 220/132 KV autotransformers, still require 132 KV buses for feeding 132/66 KV and 132/11 KV loads on the upgraded grid.
b) In case 132 KV grid is upgraded to 220 KV with 220/66 KV transformers, even then it will still require 132 KV bus for feeding 132/11 KV loads.
c) Since in PSTCL's transmission system, its most of 400 KV/220 KV/132 KV grid stations are inter-connected, therefore even after upgrading of a 132 KV grid to 220 KV, 132 KV bus may still require to maintain connectivity with other 132 KV grids.

In view of above, the reduction of 132 KV bays due to up gradation of the grid may not match with the addition of upgraded 220 KV grid station.

View of the Commission:

The objector may note the response of PSTCL.

Issue No.5: Energy Demand of State

The energy requirement figures have been given in table 15, but these figures do not match the energy balance figures of PSPCL ARR petition for MYT. The comparison is as under.

	17-18	**18-19**	**19-20**
PSTCL Table 15	61275	66483	70899
PSPCL Table 22	55824	58300	60900

5.1 The planning, for transmission purposes, could be based on loading projections of paddy season (high demand period) rather than on annual basis. As an alternative to the annual data, the PSTCL may obtain the loading projections / data / estimates from PSPCL corresponding to paddy season of the control period years, i.e. for 17-18: Loading in paddy season 2017 & so on for 2018-19 and 2019-20.

The loading would be then be based on highest estimates of MW demand and MU/ day demand during the paddy season of the concerned year.

When the Transmission system is constructed to meet the highest demand expected in paddy season of the year, both in terms of MW and in terms of MU/day, it would ensure that transmission system is adequate for the remaining months of the year.

Reply of PSTCL:

PSTCL transmission network caters to the demand of its transmission system users, which primarily includes demand of PSPCL and demand of Open Access consumers. In order to meet this growing demand, a reliable, adequate and robust transmission network is required. PSTCL in its Business Plan submitted the projection energy requirement based on input received from PSPCL at the time of filing of Business Plan and Capital Investment Plan Petition in the month of April 2016. However, the energy requirement projections for PSPCL has changed subsequently at time of filing of MYT Petition based on latest actual sales realised.

PSTCL in its Capital Investment Plan Petition had submitted that the operational and system constraints are analysed based on the loading during the paddy season and some fine-tuning of the proposed works for the Control Period would be carried out after analysing the loading during paddy seasons in 2016. Accordingly, PSTCL had submitted the revise the proposed works on September 26, 2016, keeping in view the actual maximum demand & system constraints witnessed during the current year.

The transformation capacity of 400 KV/220 KV/132 KV system of PSTCL have been planned keeping in view the CEA's load projection for Punjab and is fully based on load flow studies in line with transmission planning Criteria of CEA.

View of the Commission:

The objector may note the response of PSTCL.

Issue No.6: Smart Grid Pilot Projects

The introduction of smart grid pilot projects needs to be examined and analyzed critically, as under.

a) When original substation equipment has been procured and commissioned on basis of a conventional substation then at later stage introducing automation would comparatively be costly, it may not be workable.

b) The Sub Stations selected are not in remote/un-accessible locations.

c) Licensee should give the cost benefit analysis of this project, indicating the extra cost, and the expected benefits.

d) A remote operated/ unattended substation may be more prone to faults and demands due to malfunctions of remote operated equipment.

e) Due to prevailing law and order situation, manpower for security staff and personnel would still be required. Equipment and assets worth tens of Crores cannot be left unattended without security arrangement.

f) Instances of fire and extensive damage are occurring in attended substations. In unattended substation, in event of fire incident the damage would be multiplied.

PSTCL my supply the justification details and cost benefit analysis of this smart grid pilot project.

Reply of PSTCL:

a) Substation Automation is latest technology for operation of Grid substations. Availability of time stamped data, sequence of events, capability of controlling substations from remote control centres thus making possible reduction in manpower, further digitization of analogue signals (process bus technology) etc. are some of the advantages of Substation Automation System (SAS) which will make necessary (in future) implementation of SAS on all the old and new substations. Moreover, this is a pilot project which includes old substations and new substations which are having SAS compatible C&R panels also, in order to have experience of working with old and new technology systems. So the question about workability does not arise.

b) Keeping the advantages of SAS in view, Power Grid has already started upgrading their conventional substations to SAS compatible systems. So accessibility is not the only criteria for deciding implementation of SAS. After doing study based on this pilot project, PSTCL may take similar decision. Hence, the geographic location of substations is immaterial from the SAS point of view. Moreover, all the substations being considered in this pilot project either already have fibre optic connectivity or the same is imminent, which will provide broader range for communication. This will de-restrict the data to be fetched from the client stations.

c) As already stated above that it is a pilot project, the necessary cost benefit analysis shall be done on the bases of requirements of PSTCL.

d) Increase in frequency of faults and/or equipment malfunction with remote operation/ unmanning of a substation seems inappropriate.

e) Presence of security staff and substation attendants will “be appropriately decided later by PSTCL based on the study of this project.

f) Any probable incidents of fire and damage caused by them are irrespective of manning or unmanning of substations. However all the possible causes of potential loss to the substation will be aptly included in the study.

View of the Commission:
The objector may note the response of PSTCL.

Section-II (Part -2 :

CAPITAL INVESTMENT PLAN, TRANSCO PETITION NO. 44 of 2016)

Issue No.7: System constraints and overloading

It would be required to revise the proposed works during the control period keeping in view the actual maximum demand and system constraints witnessed during the current year i.e. FY 2016-17.

7.1 PSTCL is requested to supply the details of specific system constraints and overloading during paddy season 2016, particularly the following data.

a) Maximum loading (actual) of 400/220 kV transformer of PSTCL at Dhuri Muktsar Makhu Nakodar, Rajpura.

b) Maximum MW load recorded on each of the 400 kV lines of PSTCL during paddy season 2016.

c) Instances of over loading of 220 kV lines, which resulted in load shedding to save the overloaded lines from tripping.

d) List of 220 kV class power transformers of 100 MVA or 160 MVA which were overloaded in 2016 paddy season and which resulted in load shedding to control the overloading.

e) List of 220 kV lines of PSTCL evacuating power from Powercom thermal stations which were overloaded during period of full or high generation during paddy season.

Reply of PSTCL:

a) Maximum loading (actual) of 400/220KV Transformer of PSTCL at Dhuri, Mukatsar, Makhu, Nakodar, Rajpura is as under:

Sr. No.	Name of Sub-Station	Power Transformer	Max Demand (MVA)
1	400 KV S/S Nakodar	315 MVA T-1	246.50
2	-do-	315 MVA T-2	226.15
3	400 KV Makhu	315 MVA	231.77
4	-do-	315 MVA	230.79
5	400 KV Dhuri	500 MVA ICT-1	454
6	-do-	500 MVA ICT-2	481
7	400 KV Rajpura	500 MVA ICT-4	451
8	400 KV Shri Mukatsar Sahib	ICT-01, 315 MVA	252.16
9	-do-	ICT-02, 315 MVA	298.76

b) Maximum MW load recorded on each of the 400 kV lines of PSTCL during paddy season 2016 is as under:

Sr. No.	Name of Line	Max Demand (in MW)
1	400KV Nakodar-MakhuCkt. No.1	244.16
2	400KV Nakodar-MakhuCkt. No.2	267.37
3	400KV Nakodar-Moga	391.81
4	400KV Nakodar-Talwandi Sabo	321.04
5	400KV Nakodar-Rajpura TPS Ckt-1	470.71
6	400KV Nakodar- Rajpura TPS Ckt-2	473.85
7	400KV NPL-Rajpura-DhuriCkt.-1	491.95
8	400KV S/S Rajpura-DhuriCkt.-2	404.80
9	400KV Talwandi Sabo- Dhuri Ckt-1	261.25
10	400KV Talwandi Sabo- Dhuri Ckt-2	261.25
11	400KV NPL-S/S Rajpura Ckt-2	670.90
12	400KV Dehar- Rajpura	394.06

Sr. No.	Name of Line	Max Demand (in MW)
13	400KV Bhiwani-Rajpura	349.79
14	400KV Makhu-Amritsar Ckt-1	(+)243.52
15	400KV Makhu-Amritsar Ckt-2	(+)243.60
16	400KV Makhu-Mukatsar Ckt-1	(-)212.60
17	400KV Makhu-Mukatsar Ckt-2	(-)211.99
18	400KV Makhu- Nakodar Ckt-1	(-)243.27
19	400KV Makhu- Nakodar Ckt-2	(-)243.65
20	400KV Talwandi-Mukatsar Ckt-1	383.517
21	400KV Talwandi-Mukatsar Ckt-2	365.419
22	400KV Mukatsar-Makhu Ckt-1	209.605
23	400KV Mukatsar-Makhu Ckt-2	209.927

c) There was no load shedding during optimum generation of state generating plants at all loading conditions.

d) List of 220 kV class power transformers of 100 MVA or 160 MVA which were overloaded in 2016 paddy season and which resulted in load shedding to control the overloading is as under:

Sr. No.	Name of Sub-Stations	Name of Transformer
1	220KV S/Stn. Udhoke	220/66KV,100MVA,T/F
2	220KV Mukatsar	T1,220/132KV,100MVA, T2, 220/132KV,100MVA, T3, 220/132KV,100MVA
3	220KV Ghubaya	T1,220/66KV,100MVA, T2, 220/66KV,100MVA, T3, 220/66KV,100MVA
4	220KV S/S Mahilpur	100 MVA 220/132KV T-4 100MVA 220/132 KV T-5

e) All the 220 kV lines of PSTCL evacuating power from Powercom thermal stations remained within operating limits during period of full or high generation during paddy season.

View of the Commission:

The objector may note the response of PSTCL.

Issue No. 8: Solar PV projects

Regarding solar PV projects of 1000 MW: PSTCL should obtain the commissioning schedules from PSPCL, along with particulars of power injection points.

In case power is injected at 66 kV or lower voltage substation of PSPCL, it would de-load the Transco system to that extent.

Reply of PSTCL:

As per the reply received from PSPCL, it is intimated that till date the various solar projects of 837 MW (Approximate) have been connected with different 66KV/132KV/220KV Substations for injecting their solar power and capacities of 205 MW & 15 MW are likely to be commissioned ending March 2017 & March 2018 respectively.

The details of these projects along with S/Stn. where the solar power has been/ to be injected have been provided. It is brought out that projected capacity of solar power injection in future as per PEDA is about 1050 MW for which the details of voltage level & connectivity with PSPCL/PSTCL Sub stations will be intimated as and when the projects selection will start.

View of the Commission:

PSTCL should supply the information to the objector under intimation to the Commission.

Issue No.9: 400 kV Substation Patran

Details of proposal for 400 kV substation Patran may be supplied.

Reply of PSTCL:

400 kV Patran having an installed capacity of 2x500 MVA, 400/220 kV ICTs is being erected by PGCIL as GIS grid. This work has been included as a replacement of 2 nos earlier planned transmission work i.e. 400 kV Patran - 220 kV Mansa DC 70 Kms line and 400 kV Patran - 220 kV Bangan SC 20 Kms line, as a better option of evacuation of power from 400 kV Patranon the basis of system study. PSTCL has proposed the following schemes for getting connectivity from such substation:

a) LILO of 220 kV Substation Mansa - Sunam (SC) and 220 kV Substation Jhunir - Sunam (SC) at 400 kV S/StnPatran (220 kV bus) - 40 Km (approx.)/ 2xDC with 420 mm2 ACSR (Zebra).

b) Commissioning of 220 kV Bays - 4 Nos. (at 220 kV Bus of 400 kV Patran Substation).

View of the Commission:

The objector may note the response of PSTCL. Also, PSTCL should supply the complete details to the objector, under intimation to the Commission.

Issue No.10: New POSOCO 765KV Substations in Punjab.

It is mentioned that as per POSOCO, 2 numbers 765 kV substations may come up in Punjab, probably near Mohali and Gurdaspur.

As per Electricity Act 2003 the STU is duty bound to coordinate with CTU and Central Electricity Authority. The PSTCL /STU must take up the case of new POSOCO substation in Punjab.

a) To draw our additional power requirements from 765 kV Moga bus.

b) To draw our requirement from HDVC station being completed at Kurukshetra. A 1280 KM HVDC line with capacity 3000 MW is in final stage of completion / commissioning between Champa (Chhattisgarh) and Kurukshetra.

From Kurukshetra the power is to be dispersed to other states included by Punjab STU must take up the transmission plan to link Kurukshetra with Punjab since part of transmission charges of HVDC Kurukshetra line will be borne by Punjab also.

As per Central Electricity Authority data, a 400 kV double circuit line is being constructed from Kurukshetra to Jind, but there is no line to Punjab, whereas the HDVC line to Kurukshetra is for Northern Region as a whole.

Reply of PSTCL:

CEA vide their letter PSP&PA-1/2016 dated 09-09-2016 has intimated that 765 KV grids Gurdaspur and Mohali are tentative and shall Firm up only after the receipt of application from the prospective developed. Since no application for connectivity of LTA has been made by generation developers to CTU, as such scheme is yet to be finalized. Therefore its 765 KV system has been considered in the system study 2017-22 but associated 400 KV as well as 220 KV system is yet to finalized.

View of the Commission:

The objector may note the response of PSTCL. Also, PSTCL should supply the complete details to the objector, under intimation to the Commission.

Objection no. 4: Govt. of Punjab, Department of Power

The comments/observations of the State Government on the ARR/Tariff Petition filed by the PSTCL for the Control Period from FY 2017-18 to FY 2019-20 are as under:

Issue No.1: Revenue Gap

At present, the financial health of PSTCL is not so good. While PSTCL has been showing improvement in its fiscal health, this trend needs to be supported and encouraged. In this instant ARR Petition filed by PSTCL, the major components of increase in this gap are as below: -

(₹in Crore)

Sr. No.	Description	FY 2017-18	FY 2018-19	FY 2019-20
i)	Employee Cost	69.11	26.15	31.75
ii)	Depreciation	27.67	17.60	16.27
iii)	Interest Charges	3.90	2.05	2.18
iv)	Return on Equity	7.28	13.15	9.49

The increase in the gap is mainly because of increase in Employee Cost, depreciation, interest charges, Return on Equity etc. It is the statutory duty of the State Government to promote the Financial, Operational and Technical viability of PSTCL. Hence, in terms of Section 86 of the Electricity Act, 2003, the Commission in pursuance to its duties is requested to suggest a road map to meet this goal.

View of the Commission:

Revenue Gap is determined keeping in view the expenses and income approved by the Commission as per PSERC Regulations.

Issue No.2: Disallowances

The Commission while determining electricity tariff on the basis of tariff petitions filed by PSTCL, on its discretion allows expenditure either as per norms specified in the Regulations or the actual expenditure whereas, there should be a single approach to determine the tariff. On this basis, the Commission has been making some disallowances. These have been mainly related to employee costs, interest charges and also on account of non-achieving of various norms, performance parameters and targets fixed by the Commission. These disallowances have impaired the financial health of the PSTCL and have eroded its capacity to make investments that would help it provide quality and affordable power to the consumers in the State. This has in some ways also had an impact on the economic growth of the State. These disallowances seem to be a major reason for the accumulated commercial losses of the PSTCL. While, there have been improvements in the performance/working of PSTCL, we do believe that there is still a lot that needs to be achieved, if PSTCL is provided the requisite support in the performance of its commercial operations.

View of the Commission:

The Commission processes the ARR and fixes various norms, parameters and targets as per its notified regulations and accordingly determines the ARR on prudent check of the expenses projected in the ARR. The justified costs are allowed to the utility after processing the ARR as per the notified regulations. The Commission has stressed PSTCL in its various Tariff Orders for improvement in its working by limiting its expenses within the approved amounts and improving the performance parameters. The accumulated losses of the utility are due to non achievement of various norms, performance parameters, targets fixed by the Commission and non implementation of various directives issued in its Tariff Orders. The utility has to improve its performance through various efficiency measures and achieve the targets in respect of various parameters fixed by the Commission. Inefficiencies of the utility cannot be passed on to the consumers.

Issue No.3: Employee Cost

The Commission has been consistently disallowing the Employee Cost to the Utility, which can in no way be reduced, since the terms and conditions of an employee once recruited cannot be changed to his disadvantage during the course of his service. Further, the employees who are retiring are also contributing to increase in employee cost of PSTCL by way of payment of Gratuity, Pension etc.

PSTCL has proposed employees cost for 2017-18 at ₹538.02cCrore against 2016-17 (RE) of ₹468.91Crore.Though, Government is impressing upon PSTCL to reduce employee cost and bring in efficiency, but it will take time for PSTCL to reduce the employee cost and bring it at par with other advanced State Utilities. Till then, the Employee Cost, which is a genuine cost of Utility, must be passed on to the end consumers on an actual basis keeping in view the APTEL Judgments and genuine requirements which are statutory in nature.

In the past also, the State Government had been supporting the PSTCL's contention that actual employee cost should be allowed as pass through as it is a legitimate historical component of the cost of supply and a committed liability of PSTCL. The Employee Cost is the genuine cost of the Utility, which can in no way be reduced. Therefore, Commission is requested to allow employee cost as projected by PSTCL.

View of the Commission:

The Commission allows employee cost as per PSERC Tariff Regulations/APTEL Judgment. While approving employee cost, terminal benefits and share of BBMB employee expenses are allowed on actual basis. Also refer paras 2.4, 3.4, 4.5 and 5.5 of this Tariff Order.

Issue No.4: A&G Expenses/R&M Expenses

The PSTCL has submitted the Administration and General (A&G) expenses and Repair & Maintenance (R&M) expenses as per relevant MYT Tariff Regulations, 2014 and its subsequent amendments. The State Government has been taking huge initiative for providing quality, uninterrupted and affordable power to its valuable consumers in the State and the transmission system needs to maintain at its best. The transmission system of the State is being upgraded and augmented to be maintained efficiently with appropriate replacements of equipments and renovations so that uninterrupted supply can be maintained and grid failure be avoided. Commission is requested to allow Administration and General (A&G) expenses and Repair & Maintenance (R&M) Expenses as submitted by PSTCL.

View of the Commission:

The Commission allows R&M/ A&G expenses as per Regulation 26 of PSERC MYT Regulations, 2014, after prudent check. Also refer paras 2.5, 2.6, 3.5, 3.6, 4.6, 4.7 and 5.5.2 of this Tariff Order.

Issue No.5: Capital Expenditure

The PSTCL has submitted Capital Expenditure of ₹226.40 Crore, ₹323.19 Crore and ₹313.42 Crore during control period of FY 2017-18to FY 2019-20 which includes laying of transmission network for evacuation of power from the upcoming generation projects in the State as well as for evacuation of power share of Punjab from various Central Sector Projects from the nearest touch-points of 400 KV higher voltage network of the Power Grid, strengthening of the existing transmission network to cope up with the growing demand and connectivity to the new areas under development of the new EHV Sub-stations, Transmission Lines and system improvement works in the existing transmission system, additional transformers have proposed at 400KV Sub-stations at Makhu and Nakodar etc. The Commission is requested to allow these expenses keeping in view the overall expenditure of the utility.

View of the Commission:

Refer para 5.11 of this tariff Order.

Issue No.6: Transmission Losses

The Commission is requested to approve the Transmission losses taking into consideration the Transmission losses for other State utilities or benchmarking with CERC norms.

View of the Commission:

In the absence of intra-state boundary metering the Commission has been fixing the targeted Transmission loss at 2.5%. PSTCL has started getting data of all inter-state boundary meters and the data is under verification/stabilization stage. The Commission shall fix the Transmission loss on the basis of actual Transmission loss of PSTCL. Also refer to Directive No.6.1 of this Tariff Order.

Issue No. 7: SLDC Business

PSTCL is discharging the statutory functions of the SLDC in the State of Punjab. State Load Despatch Centre in Punjab has started working independently since FY 2011-12. SLDC of Punjab is at nascent stage of being established as an independent unit.

The SLDC is pivotal to the State’s power sector. Its financial, operational and technical viability has to be maintained at every cost. The Commission is requested to approve the expenditure as detailed in the ARR for smooth functioning of SLDC.

View of the Commission:

The Commission separately approves the expenses projected in the ARR for SLDC business of PSTCL in view of PSERC Regulations after prudence check.

Annexure-III

Minutes of the Meeting of State Advisory Committee of the Punjab State Electricity Regulatory Commission, held on February 14, 2017.

The meeting of the PSERC State Advisory Committee was held in the office of the Commission at Chandigarh on February 14, 2017 to discuss ARRs and Tariff Petitions for MYT Control Period from FY 2017-18 to 2019-20 filed by PSPCL and PSTCL. The following were present:

1	Shri D.S. Bains Chairman, PSERC, SCO 220-221, Sector-34-A, Chandigarh.	Ex-officio Chairman
2	Er. S.S. Sarna Member, PSERC,SCO 220-221, Sector-34-A, Chandigarh.	Ex-officio Member
3	Secretary Food & Supplies and Consumer Affairs, Government of Punjab, Chandigarh.	Ex-officio Member
4	Secretary Department of Power, Government of Punjab, Chandigarh.	Member
5	Labour Commissioner, Deptt. of Labour & Employment, Government of Punjab, Chandigarh	Member
6	Director/Distribution, PSPCL, The Mall, Patiala.	Member
7	Director, Finance & Commercial, PSTCL, The Mall, Patiala	Member
8	Chief Engineer/ARR&TR, PSPCL, F-4,Shakti Vihar, Patiala	Member
9	Director, Agriculture, Deptt. of Agriculture, Govt. of Punjab, Chandigarh	Member
10	Chief Project Manager, Rural Electrification Corporation Ltd, REC, Project Office, Bay7-8,Sector2,Panchkula	Member
11	Chief Executive Officer, Punjab Energy Development Agency (PEDA), Plot No.1, Sector 33-A, Chandigarh	Member
12	Chairman, PHDCCI, Punjab Committee, Sector 31-A, Chandigarh	Member
13	Prof. R.S. Ghuman, Chair Professor, Nehru SAIL Chair & Head Panchayati Raj Unit, Centre for Research in Rural & Industrial Development (CRRID), Sector19-A, Chandigarh.	Member
14	Er. S.K. Anand, (Ex-Member, PSEB),68, Ajit Nagar, Patiala	Member

15	Er. A.S. Pabla, (Ex-Chief Engineer, PSEB), H.No.69,Phase-IIIA, S.A.S Nagar, Mohali.	Member
16	Sh. Bhagwan Bansal, Punjab Cotton Factory, Ginners Association, Regd. Shop109, New Grain Market, Mukatsar	Member
17	Shri Jagtar Singh, Director, Social Work & Rural Development Centre, VPO Nurpur Bedi, Distt. Ropar	Member

At the outset, the Chairman welcomed the members of the State Advisory Committee and thanked everyone present for having spared time to attend the meeting. The Chairman thereafter requested the members to offer suggestions/comments on the ARR and Tariff Petitions for the MYT control period financial year 2017-18 to FY 2019-2020 filed by PSPCL and PSTCL. He also requested the members to give their views/suggestions for utilization of surplus power available in the State of Punjab. Member, PSERC also welcomed State Advisory Committee Members and requested them to give their suggestions for promoting industries under "Make in India" programme. He also sought the views of the Members for maximum utilization of surplus power by enhancing consumption by the existing industry as well as by ensuring that the sick/shutdown industry is revived, and also to ensure that benefit be given to poor consumers in the state of Punjab. Thereafter, the members gave their valuable suggestions as under:-

1. <u>Shri Venu Parsad, Principal Secretary, Power, GoP</u>

He suggested as under:

- PEDA may be directed to delay the proposals for setting up more solar power projects for at least one year to avail the benefit of declining prices of solar modules/equipments prices, which would be in the overall interest and benefit of the State.
- Many of PPAs were signed during the period of power deficit regime, to meet with the peak demand. In the backdrop of CEA prediction of 10% annual growth in the power demand, he informed that, in view to ensure MOD of power procurement, state thermal generating plants could not be run to their higher variable cost. He further informed that the decision to close one unit of GNDTP was already under consideration of GoP. He pointed out that in view of the surplus power situation, the challenge is how to increase the consumption of power in the State. He stated that in view of fast decreasing rate of solar power, execution of new PPAs was increased during the last three years. He suggested the Commission to determine the tariff

judiciously to protect the interest of all stakeholders.

- He added that the introduction of UDAY scheme had significant impact such as on the interest on loans of PSPCL. Interest burden to the extent of loans taken over the State of Government of Punjab stands reduced. The same also impacts the revenue gap of FY 2016-17. DISCOM loans have also been paid by the Utility due to issuance of Bonds by the GoP. Thus, ascending to this, the financial position of PSPCL has been eased due to restructuring of loan.

2. <u>Shri. U.K. Panda, Director/F&C, PSTCL</u>

Following suggestions were given:

- Director/F&C, PSTCL has raised out the important issue relating to the financial viability of the Power Utilities. He said that the restructuring of PSEB in 2010 was done with a Financial Restructuring Plan (FRP) which had projections for 10 years with certain assumptions with regard to revenue & cost. These assumptions, however, did not materialize for various reasons. He stated that in the ARR/ tariff allowed by PSERC fell short of the projected ARR/tariff resulting in revenue shortfall. This affected the financial viability of Power Utilities which need to be addressed by the Hon'ble Commission. He referred to Sec-61 of the Electricity Act, 2003 and the National Tariff Policy (NTP) notified by GOI. Section-61 lays down the guidelines which, interalia, include recovery of cost of electricity through tariff in a reasonable manner. One of the objectives of the NTP is to ensure financial viability of the Utility while setting the tariff. He urged upon the Hon'ble Commission to take a pro-active approach and consider the submission of the Utility for approval of the Business Plan and the ARR/Tariff of FY 2017-18 to FY 2019-20. While doing so, the financial viability of the Power Utilities may be kept in view. He appreciated the initiative of the Hon'ble Commission in implementing MYT with a control period of 3 years beginning 2017-18. He said that Long Term approach will mitigate the regulatory uncertainty to a large extent and set a direction in the tariff setting process which will be in the interest of all the Stakeholders. The baseline values assume importance in the MYT regime for allowing costs on a normative basis during the control period. He requested Hon'ble Commission to consider the audited figures of FY 2015-16 as the base line values for allowing tariff on normative basis for the control period FY 2017-18 to FY 2019-20 which is in accordance with the MYT Regulations, 2014. He informed that audited accounts of PSTCL for FY 2015-16 has since been submitted to the Hon'ble Commission.

3. Shri. S.K. Anand

He stated as under:

- Heavy cross subsidy is being imposed on all other categories of consumers due to a very low price fixed for paddy consumption, which otherwise happens to be the costliest power. Apart from the fact that paddy load causes the highest losses in the system; around 30% or more of additional generation, transmission and distribution capacity has been created, solely for supporting the seasonal paddy load. He further stated that, PSERC fixed the paddy tariff at ₹4.58 per unit last year, when Haryana paid subsidy at the rate of ₹7.38 per unit for the same period.

  Payment of large amounts of fixed Charges to the private power producers is an extremely serious issue. Addition of huge quantum of power in one go, was not a judicious decision, without a concrete plan for industrial growth. He said that, the decision makers were either unaware, or ignored the fact that Punjab has a typical load curve, where demand as well as consumption drops by 40-50% during the non paddy months. Collective efforts are required for tackling this issue with a focus on industrial growth

  He further stated that the recent orders issued by PSERC to give free power to backward classes involving huge addition in subsidy will also add to PSPCL's woes, and needs to be reviewed. Allowing industrial power @4.99 to all SP and MS categories of consumers; and to LS consumers for additional consumption, over and above their existing average, would lead to all kinds of problems and is like open pandora Box.

  Implementation of PSERC directions for reorganization of the distribution set-up on functional basis is absolutely essential. He said that he has been pushing it for the last many years, and he is of the firm opinion, that they cannot start their journey towards achieving international standards in the design, construction and O&M of the system, without ensuring all round engineering inputs in these areas. Real reforms would start, only after we restructure the distribution setup, which at present, is based on the 4-5 tiered 1895 PWD structure, by creating dedicated units for O&M, Design and Construction, Protection, plant, regional control and commercial activities. SDO office needs to be abolished, to be replaced by functional engineers assisting the Sr. engineers heading these specialized wings, with their involvement in purely engineering activities, for the first 7-8 years. He however added that, this is not an easy job, and will be opposed by all the vested interests across the board, including engineers, and will require a strong will of the stake holders.

He expressed the view that without these inputs, PSPCL would not be able to undertake/complete the massive task of updating the Distribution system in line with those operating worldwide. Implementation of scada at 11 kv levels is not possible, without an over haul of the distribution system. He added that distribution system in Kenya, where he worked as an expatriate engineer from 1981 to 1986 was much better designed, much better constructed, and much better maintained, with very low levels of trippings/breakdowns, almost negligible levels of equipment loss, and much lower losses. More than 20 ring main stations, operating in Nairobi, the capital city with a population of one million, were unmanned, and incidence of 11 kv breaker trippings was very low. Unmanned stations can operate only with high construction standards both for the station, as well as the system down the line, which has to be well designed, with proper insulation coordination. The levels of 11 trippings, loss of equipment, technical losses, and the quality of supply are nowhere near the international figures. According to this, implementation of scada at 11 kv levels is not possible, without an over haul of the distribution system.

Having said that, he added that, in the prevailing national environment, PSPCL was declared the best running company last year, by the Ministry of Power, Government of India, with lowest AT&T losses; and in his view, is also the best among all the departments of Punjab Government. It is fully equipped to take the next leap, and needs all the support from Pb. Govt. as well as PSERC, which in his views has been lacking thus far.

He complemented PSERC for having developed an excellent data base and data analysis proficiencies of high standards. He was of the view that PSERC is capable of going into the nitty gritty of the report in a fair manner, and arriving at a suitable tariff increase, which is a must, as no increase has been given during the past two years.

He recommended to GoP that cross subsidy for industrial consumers being very high, Paddy price this time, should be fixed @ ₹6 per unit, or more, with suitable compensation, or at least no increase for the industrial consumers.

4. <u>Er. A.S. Pabla, Ex-chief Engineer, PSEB</u>

He made the following points:

- It was pointed out that while finalizing the two part tariff, the Commission may keep in view that the solar producers and consumers are not adversely affected. RPO specified by the Commission is required to be complied with by PSPCL and needs to be monitored regularly.

- While finalizing the two part tariff, the Commission may keep in view that the interests of small consumers (SP & DS) and of solar CPPs are not adversely affected.
- AMP in all AP feeders needs to be commissioned.
- Benefit of DSM has not been given/mentioned in ARR.

5. Shri R.S. Sachdeva, PHDCCI

The following suggestions were made by him:

- He pointed out that in the MYT petition for the control period from FY 2017-18 to FY 2019-20 filed by PSPCL, PSPCL has estimated ₹13.89 per kWh as cost of generation from its own thermal stations and ₹11.51 per kWh as cost of generation from its own Hydel stations at page no. 5 of Vol-I (Part-3) which is a matter of concern and needs to be looked into. It was suggested that the study regarding specific suitable locations for installation of solar power plants at different locations in Punjab and techno-economic study for closure of inefficient thermal plants should be got carried out from Institute of Management, Ahmadabad.
- He thanked the Commission for making efforts for survival of the industry especially ToD tariff which helped the industry to a great extent. He pointed out that in the MYT petition for the control period from FY 2017-18 to FY 2019-2020 filed by PSPCL, it has estimated very high cost of generation from its own thermal stations and Hydel stations at page no. 5 of Vol-I (Part-3) which is a matter of concern and needs to be looked into. It was suggested that the PSPCL should call tenders for Power Procurement for Price discovery. It was also suggested that PPAs be reviewed, old & inefficient plants be made defunct, TPT should not be to the disadvantage of the Industrial consumers, surcharge of 10 paise/unit on continuous industry be discontinued. It was also suggested that clarification/orders of PSERC should not normally be contested by PSPCL in APTEL.

6. Shri Balour Singh, Director, PEDA

The following issues were raised by him:

- He said that the renewable capacity in the State is approximately 1000 MW comprising solar, biomass and hydro. The RPO requirement for FY 2016-17 is 5.4% whereas MoP, GoI has suggested the same to be 15% by 2022. The solar tariff has achieved grid parity. The Commission has approved the tariff for 100% rice straw based power projects. Accordingly, Implementation of Agreements for 182 MW of such projects have been signed by PEDA with various developers. It was requested that PSPCL may be directed to sign the PPAs for these projects at the earliest.

7. **<u>Smt. Aishvarya Sharma, representative from Director Agriculture, Punjab</u>**

- It was requested that PSPCL may be directed to make 100% rice straw based power plant at Jalkheri operative as soon as possible. It was suggested that the number of hours of supply to agricultural pumps in the months of April and May, may be increased to 8 hours so that the farmers are able to decompose the wheat straw in the fields itself.

8. **<u>Shri R.S. Ghuman, Chair Professor, Nehru SAIL Chair & Head Panchayati Raj Unit, CRRID</u>**

The following issues were raised by him:

1. **The financial position of the Punjab State Power Corporation Limited (PSPCL)**
He pointed out that it is seen from the ARR of the PSPCL (page 48, table 28, Vol. 1, part 1), interest on loans for 2014-15 is ₹1,161.08 crores. It seems that the increase in the opening balance of loan was primarily because of the fact that short term and medium term outstanding loan as on 16th April 2010 were repaid by taking loan and new loan for a longer period were raised in subsequent years as per statutory notification of the Government of Punjab. It is pertinent to know that repayment of outstanding loan by taking new loans is not a healthy symptom. Moreover, this trend is unsustainable for the financial health of the PSPCL.

Similarly, according to him, interest on working capital loan for 2014-15 is ₹1423.28 crores. This implies that PSPCL is unable to finance its capital from its own sources. Such a scenario will further cripple the PSPCL financial health. He was sure that the amount of loan and interest would have been higher in 2015-16 (also in the subsequent years) but the ARR does not carry that figure for the FY 2015-16.

2. **The subsidy by the Government to various sections** (**Table 35, page 57, Table 59, page 95, Table 54 page 79 of Volume I part II)**
It was pointed out that though every government has the right to give subsidy to the deserving sections and population, yet this issue needs a thorough and serious review. As per the rationale of subsidy, it is either given to promote new technology or to address some distress situation. In the second case subsidy is aimed at certain targeted groups but the Government of Punjab is giving subsidy across the State especially to the agriculture sector. Moreover, the kind of power subsidy being given to agricultural sector is against the very spirit of diversification. This promotes the paddy crop and injudicious use of water leading to serious depletion of water level. Even from the sustainability point of view, the depletion of water level has already become a serious issue and needs a public debate. During the last about 15 years,

the water level has gone down from nearly 6 meter to 18 meters in the central Punjab which is mainly the paddy zone.

He further stated that the total amount of subsidy for FY 2014-15 was ₹5874.94 crores and as per the ARR, the Government of Punjab gave ₹4642 crores. Thus, the amount of ₹1233 crores was due from the Government of Punjab. Thus, ARR does not carry the subsidy amount for 2015-16. Subsidy amount for 2016-17 was ₹7171.23 crores which will rise to ₹8000 crores in 2017-18, to ₹8248 crore in 2018 19 and further to ₹8506 crores in 2019-20. This means, according to him, for a span of 4 years the subsidy amount will increase by ₹1335 crores which come out to be approximately ₹455 crores per annum. Out of this subsidy, the lion's share goes to the agricultural sector.

It was noted with concern that the anti-diversification, depletion of water level, increasing number of submersible tube wells and need for higher and higher horse power of motors will certainly add pressure to the sub-soil water as well as agricultural economy.

According to him, it is high time that the policy of subsidy be reviewed and rationalized. One of the plausible ways out may be giving power subsidy only up to semi- medium farmers (up to 7.5 acres). Alternatively this subsidy can be limited to one tube well per household. It was suggested that, the amount saved on this account should be invested in rural education and rural health.

3. Surplus power or problem of plenty

It was stated that three private thermal power plants (GVK, TPS and NPL) have no doubt made the state power surplus and the Government is calming credit for it. However, the surplus has now become liability for the state exchequer and the financial health of PSPCL.

In view of the MoUs signed between these plants and the utility, the PSPCL is bound to purchase power from these plants. In case the PSPCL does not purchase power, even then the fixed charges shall have to be paid to these plants and in that case only variable charges are saved. It has been found that during the last couple of years, the PSPCL's own thermal power plants are either running at a much lower capacity or facing a frequent shut down. This means that the manpower on its own plants, machinery and infrastructure is being underutilized at the cost of the consumers and tax payers. He advised that if possible, the MoUs need to be reviewed.

4. **The capital investment**

It was pointed out that as per ARR Part I, table 14, page 51, The PSPCL proposes to carry out the capital works with 100% debt financing (Page 52) whereas regulation 19 of the PSERC MYT regulation 2014 provides the debt equity ratio as 70:30. This means the debt amount and the debt service is increasing.

Punjab State Transmission Corporation Limited (PSTCL)

It was stated that the financial health of PSTCL too is not very encouraging as the loan of this utility has been increasing over the period of time. As on 31 March 2014, the total loan on PSTCL was ₹3718 crores which increased to ₹3971 crores during 2014-15. It further increased to ₹4000 crores in 2015-16 and further to ₹4174 crores in 2016-17 (table 15 page 30). He observed that in view of the old transmission lines and other infrastructure, the utilities would need a huge amount for repair and replacement.

It was stated that the funding of capital investment is also being met by raising loans. This also needs a serious review.

The following Suggestions were given:

1. In view of the importance of the PSPCL and PSTCL for the government and people of Punjab, the public sector generation and transmission must be saved from financial crunch and further strengthened. At any given point of time the majority share in power generation must be with the public sector as power is an essential and a public utility.
2. In order to have a comparative analysis, the ARR should give a comprehensive table of gross and net generation from various sources, at least for the previous ten years.
3. Such a table should also be there for the energy balance for the previous ten years.
4. The AP consumption should also be given in a tabular form for the last ten years. This sector also needs to metered.
5. A table containing subsidy amount to AP and other consumers should also be given in the ARR.
6. The PSPCL should also come out with its financial status report from the year of incorporation. There is also a need to look into whether subsidy is the major cause of its bad financial health or there are some other reasons. This is important so that it becomes a bench mark for the subsequent years.
7. Since the utilities cannot continue with ever rising debt and debt service, there is a

need to conduct a study for the reasons of bad financial health and suggestions / recommendations to address the issue so as to improve the financial health of the utility and make it a surplus budget entity.

8. Since surplus power is a liability, there is a need to enhance the consumption of power within the state across all sections of consumers and finding the potential consumers outside the state and even across the international border. One of the ways being suggested is to give incentive in the form of lower tariff for big consumers, a policy of paying less for consuming more. In view of the marginal cost pricing principle, this suggestion seems to be quite plausible. However, there is a need to be cautious so that the wasteful consumption of electricity is avoided.

   The second way out is to revise and strengthen industrial and commercial sector so that there is increase in demand for power. This would enhance employment and increase demand in the domestic sector as well.

   In view of the studies that a 1% increase in GDP leads to 1.5% increase in demand for energy, this means the state of Punjab need to accelerate the growth rate of the gross state domestic product (GSDP) which has been facing a deceleration for the last about 25 years. Since 1992, the growth rate of GSDP of Punjab has been much lower than the national average. This has led to a lower demand for power especially in the industrial sector. The closure of industrial units (18770 units during 2006-13) and the migration of industry outside the state also need serious attention if one really wants to address the issue of surplus power and translate it into an opportunity.

   Prof. Ghuman stated that he is conscious about the fact that some of the suggestions may not fall in the purview and jurisdiction of PSERC yet the PSERC and other stake holders need to play their role in order to accelerate the growth rate of the state, especially that of industrial sector, so that the surplus power is consumed for the development of the state and its economy.

9. <u>Sh. Sarbhag Singh Passi (Agriculture Manufacture Association)</u>

- It was suggested by him that Agro-Industry be promoted by giving subsidy.

10. <u>Shri Bhagwan Bansal, President of Punjab Cotton Factories & Ginner's Association</u>

He made the following points:

- It was suggested that special package be given to revive the sick & closed small units. He also suggested that a system like Lok-Adalats be established to settle dispute cases out-of-courts. He also pointed out that there is the need to study the reasons for shifting of industry from Punjab to other States and also that it is required to develop confidence in Industrial captains to bring Industry to Punjab. Further, he suggested that Force Majeure clause be also included for Cotton Ginning Industries in the Tariff Orders under consideration.

- He informed that cotton Ginning Industry is passing through very critical period, because the raw material of the industry is ‘Narma(cotton)’ and the cotton crop has failed from the last five years to six years, which is in the hands of Nature.

  He informed the Hon’ble Commission that there are many reasons affecting the cotton crop.

  a Attack of Americal Bowl-worm.

  b Attack of White and Pink Fly.

  c Encouragement of Govt. policies for paddy and basmati after sanctioning tubewell connections.

  d Non-availability of good quality seed and tested pesticides to be distributed tofarmers.

  e No lab to check seeds & pesticides in Malwa.

  f Faulty tax structure of sales Tax Department of Punjab compared with neighboring States.

  Due to above mentioned reasons no one can predict future crop of cotton. At present only 58 ginning units remains functional out of 422 units. He requested to induct force majeure clause, if any natural calamity affects on cotton crop then as practice in Arc Furnace to charge 4-5month General Category Tariff rather than charge seasonal rate, to save this industry.

  Second suggestion from him was that after running cotton seasonal industry for 4-5 months, if the consumer wants to run it for another two months then the rate should be of General Category ₹188/- rather than 518/- per kVA of seasonal Category.

  In the end the Chairman, PSERC thanked all the Members again for being present for the meeting and for giving their valuable suggestions.