CONTENTS

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

PETITION NO. 71 OF 2014

IN THE MATTER OF:

ANNUAL REVENUE REQUIREMENT

FILED BY THE PUNJAB STATE POWER CORPORATION LIMITED

FOR THE FINANCIAL YEAR 2015-16

PRESENT : Ms. Romila Dubey, Chairperson
Er. Gurinder Jit Singh, Member

Date of Order: May 05, 2015

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) and Tariff for supply of electricity by the Punjab State Power Corporation Limited (PSPCL) to the consumers of the State of Punjab for FY 2015-16. The ARR filed by PSPCL, facts presented by PSPCL in its various submissions, objections received by the Commission from consumer organizations and individuals, issues raised by the public in hearings held at Jalandhar, Ludhiana, Bathinda & Chandigarh, the response of PSPCL to these 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 & all other relevant facts and material on record have been perused before passing this Order.

1.1 Background

The Commission has in its previous twelve Tariff Orders determined tariff in pursuance of the ARRs and Tariff Applications submitted by erstwhile Punjab State Electricity Board (the Board) for the Financial Years (FYs) 2002-03 to

2006-07, 2008-09 to 2010-11 and Punjab State Power Corporation Limited (PSPCL) for FYs 2011-12 to 2014-15. Tariff Order for the FY 2007-08 had been passed by the Commission in suomotu proceedings.

1.2 ARR for the year 2015-16

PSPCL has filed the ARR for FY 2015-16 on 27.11.2014. In this Petition, PSPCL 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 after restructuring of the Board by Government of Punjab vide notification no.1/9/08-EB(PR)/196 dated 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 named as Punjab State Power Corporation Limited (PSPCL) and the TRANSCO has been 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". The relevant content of the Transfer Scheme is reproduced below:

"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".

Hence, the PSPCL is left with the Distribution, Generation and allied activities of the erstwhile PSEB. As per the Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2005, [Regulation–1(3)(k)], PSPCL is considered as an integrated utility since it is currently engaged in multiple functions namely Generation, Trading and Distribution of electricity.

First Amendment in Transfer Scheme notified by Government of Punjab:

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 amendment:

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.

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.

v) 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.

vi) Until otherwise directed by the State Government, 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.

vii) The Government of Punjab notified the final Opening Balance Sheets for Powercom and Transco as on the 16th April, 2010.

Based on the Opening Balance Sheet notified by the Government of Punjab vide the Amendment in Transfer scheme and the provisions of Regulation 13 of the PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 and in compliance to the directives of the Commission on the matter and based on projections and consolidated revenue gap, PSPCL has filed this petition for approval of ARR and Determination of Tariff for FY 2015-16, review of ARR for FY 2014-15 based on actual figures for the first half of FY 2014-15 and projections for second half of the year and for true up of ARR for FY 2012-13 based on Audited Annual Accounts for the year and in terms of provisions of PSERC Tariff regulations 2005 as amended from time to time.

The petitioner has made the prayer to the Commission to:

a) Consider the submissions and approve the final true up of expenses for FY 2012-13, and Revised Estimates for FY 2014-15;

b) Approve to consider the true up for FY 2013-14, when the Audited Annual Accounts for the year are available;

c) Approve the Aggregate Revenue Requirement for FY 2015-16;

d) Treat the filing as complete in view of substantial compliance as also the specific requests for waivers with justification placed on record;

e) Examine the proposal submitted by the petitioner for a favourable dispensation as detailed in the proposal;

f) Condone any inadvertent omissions/errors/shortcomings and permit PSPCL to add/change/modify/alter this filing and make further submissions as may be required at a future date;

g) Pass such further order, as the Commission may deem fit and proper, keeping in view the facts and circumstances of the case.

In the ARR Petition for FY 2015-16, PSPCL has worked out ARR of ₹28681.53 crore for FY 2015-16, consolidated gap of ₹6803.85 crore upto FY 2014-15 and carrying cost of gaps as ₹1244.68 crore. Further, the cumulative gap has been projected by PSPCL as ₹11317.78 crore, after taking into consideration Non-Tariff Income of ₹997.57 crore and Revenue from existing Tariff as ₹ 24414.81 crore.

On scrutiny, it was noticed by the Commission that the ARR was deficient in some respects and the same were communicated to PSPCL vide DO No. 13250/T-185 dated 01.12.2014. The replies to the deficiencies were furnished by PSPCL in its letter no. 1229/CC/DTR/Dy.CAO/244/Deficiency dated 09.12.2014. It was again pointed out vide letter no. 13526 dated 10.12.2014 that the reply submitted by PSPCL was still deficient in respect of some of the deficiencies pointed out vide DO letter dated 01.12.2014. PSPCL submitted reply to letter no. 13526 dated 10.12.2014 vide memo no. 1246/CC/DTR/Dy.CAO/244/Deficiency dated 15.12.2014. The Commission took the ARR Petition on record on 18.12.2014 after considering the replies submitted by PSPCL vide letter no. 1246/CC/DTR/Dy.CAO/244/Deficiency dated 15.12.2014.

The Annual Revenue Requirement determined by the Commission in this Tariff Order is based on the petition filed by PSPCL, operating as a Utility performing functions of Generation, Distribution and Trading of electricity.

1.3 Objections and Public Hearings

A public notice was published by PSPCL in the The Tribune (English), The Hindustan Times (English), Dainik Bhaskar (Hindi), Punjabi Jagran (Punjabi) and Daily Ajit (Punjabi) on 23.12.2014/25.12.2014/28.12.2014 inviting objections from the general public and stakeholders on the ARR filed by PSPCL. Copies of the ARR were made available on the website of PSPCL and in the offices of the Chief Engineer/ARR and TR, PSPCL, Patiala and also in the offices of all the Chief Engineers (Operation) and all the Superintending Engineers (Operation) of PSPCL. 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 with an advance copy to PSPCL. The public notice also indicated that after perusing the objections received, the Commission will conduct public hearings on the dates which would be notified subsequently.

The Commission received 7 Nos. written objections by due date and 21 Nos. written objections after due date. The Commission decided to take all these objections into consideration.

Number of objections received from individual consumers, consumer groups, organizations and others are detailed below:

Sr. No.	Category	No. of Objections
I	**II**	**III**
1.	Chambers of Commerce	3
2.	Industrial Associations	12
3.	Industry	4
4.	Railways	1
5.	PSEB Engineers' Association	1
6.	Individuals	1
7.	Govt. of Punjab (GoP)	1
8.	Others	5
9.	**Total**	**28**

The list of objectors is given in Annexure-III, Volume-II of this Tariff Order. PSPCL submitted its comments on the objections which were made available to the respective objectors.

The Commission decided to hold public hearings at Chandigarh, Jalandhar, Ludhiana and Bathinda. A public notice to this effect was published on 23.01.2015 in various news papers i.e. Indian Express, The Tribune, Punjab Kesri and Daily Ajit as well as uploaded on the website of the Commission and also informed the individual objectors in this respect, as per details hereunder:

Venue	Date & time of public hearing	Category of consumers to be heard
CHANDIGARH Commission's office i.e. SCO 220-221, Sector 34-A, Chandigarh.	**February 02, 2015** 11.00 AM to 1.30 PM	All consumers except Industry and Agricultural consumers/ organizations and Officers' /Staff Associations of PSPCL and PSTCL .
	3.00 P.M. onwards	Agricultural consumers and their unions.
JALANDHAR Conference Room, Office of Chief Engineer/Operation (North), PSPCL, Shakti Sadan, GT Road, Near Layallpur Khalsa College, Jalandhar.	**February 04, 2015** 11.30 AM to 1.30 PM (To be continued in the afternoon, if necessary)	All consumers/organizations of the area.
LUDHIANA Multi Purpose Hall, Power Colony, PSPCL, Opposite PAU, Ferozepur Road, Ludhiana.	**February 06, 2015** 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 10, 2015** 11.30 AM to 1.30 PM. (To be continued in the afternoon, if necessary)	All consumers/organizations of the area.
CHANDIGARH Commission's office i.e. SCO 220-221, Sector 34-A, Chandigarh.	**February 12, 2015** 11.00 AM to 1.30 PM	Industrial consumers/ organizations.
	3.00 P.M. onwards	Officers' /Staff Associations of PSPCL and PSTCL and other Organizations.

Through this public notice, it was also intimated that the Commission will also hear the comments of PSPCL and PSTCL to the objections raised by the public besides Corporations' own point of view regarding the ARR Petitions at Commission's office i.e. SCO 220-221, Sector 34-A, Chandigarh on February 19, 2015 from 11.00 AM to 01.30 PM (to be continued in the afternoon, if necessary).

The public hearings were held as per schedule and views of objectors, general public and PSPCL were heard by the Commission. A summary of the issues raised in the objections, the response of the PSPCL and the views of the Commission are contained in Annexure-IV, Volume-II of this Tariff Order.

1.4 The Government was approached by the Commission vide DO letter no. 13869 dated 26.12.2014 seeking its views on the ARR to which the Government responded vide its letter no. 188 dated 20.04.2015. The same has been considered by the Commission.

1.5 State Advisory Committee

The State Advisory Committee constituted under Section 87 of the Act, discussed the ARR of PSPCL in a meeting convened for this purpose on 16.02.2015. The minutes of the meeting of the State Advisory Committee are enclosed as Appendix-I, Volume-I of 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 given to all stakeholders in presenting their views.

1.6 Compliance of Directives

In its previous Tariff Orders, the Commission had issued certain directives to PSPCL in the public interest. A summary of directives issued during previous years, status of compliance along with comments and Directives of the Commission for FY 2015-16 is given in Chapter 6 of this Tariff Order.

Chapter 2
True-up for FY 2012-13 & FY 2013-14

2.1 Background

2.1.1 FY 2012-13

The Commission approved the ARR and Tariff for FY 2012-13 in its Tariff Order dated 16.07.2012, which was based on the costs and revenues estimated by the Punjab State Power Corporation Limited (PSPCL). PSPCL had furnished revised estimates for FY 2012-13 during the determination of ARR and Tariff for FY 2013-14. The Commission, in its Tariff Order of FY 2013-14, reviewed its earlier approvals and re-determined the same based on the revised estimates made available by PSPCL. PSPCL, in its ARR Petition for FY 2014-15, prayed that the truing up of the costs and revenue for FY 2012-13 may be undertaken by the Commission after the finalisation of the Audited Annual Accounts of the year. As per provisions under Tariff Regulations, True up can be undertaken only after the Audited Annual Accounts are made available. As such, the Commission decided to undertake the True up for FY 2012-13 along with the ARR Petition of PSPCL for FY 2015-16, when the Audited Annual Accounts for FY 2012-13 were likely to be made available.

2.1.2 FY 2013-14

The Commission had approved the ARR and Tariff for FY 2013-14 in its Tariff Order dated 10.04.2013, which was based on costs and revenue estimated by PSPCL. PSPCL in its ARR for FY 2014-15 had submitted the revised estimates of costs and revenue for FY 2013-14. The Commission considered it appropriate and fair to revisit and review the approvals granted by it for FY 2013-14 with reference to the revised estimates made available by PSPCL and accordingly approved the revised ARR for FY 2013-14 in the Review.

2.2 True up for FY 2012-13 & FY 2013-14

PSPCL in the ARR for FY 2015-16, furnished the Annual Accounts for FY 2012-13 signed by Statutory Auditor alongwith Audit Report of Statutory Auditor and stated that the CAG Audit Report is still awaited. PSPCL vide its letter no. 1229 dated 09.12.2014 intimated that audit certificate from CAG is still awaited and will be submitted to the Commission as and when received from CAG. Again, PSPCL vide its letter no. 1246 dated 15.12.2014 intimated that CAG Audit Report will be submitted to the Commission likely by 31.01.2015. PSPCL has submitted CAG Audit Report on 27.03.2015 vide its letter no. 407/ARR/DTR/Dy. CAO/244 dated 27.03.2015. The Commission is not considering CAG Audit Report submitted by PSPCL on 27.03.2015, as the Commission had already finalised the contents/ figures of the Tariff Order by the time PSPCL submitted CAG Audit Report. Further, opportunity has not been given to the general public and stakeholders for offering comments on the CAG Audit Report. PSPCL has further submitted in the ARR that auditing of accounts for FY 2013-14 is under process. The true up of costs and revenue for FY 2013-14 will be submitted as soon as the audited accounts for FY 2013-14 are available. PSPCL in its ARR for FY 2015-16, has prayed that the truing up of costs and revenue for FY 2013-14 may be undertaken by the Commission after the finalization of the Audited Annual Accounts for the year. As per provision under Tariff Regulations, True up can be undertaken only after the Audited Annual Accounts are made available.

In view of the above, the Commission decides to undertake the True up for FY 2012-13 and FY 2013-14 alongwith ARR petition of PSPCL for FY 2016-17.

Chapter 3

Review for FY 2014-15

3.1 Background

PSPCL, in its ARR petition for FY 2015-16 relating to Review for FY 2014-15, has estimated the energy sales, operating parameters, generation, expenditure for generation & distribution and revenue for FY 2014-15, based on actual energy sales, generation, expenditure and revenue for the first half (April, 2014 to September, 2014) of FY 2014-15 and estimated performance for the remaining part of the year and has provided the revised estimates of energy sales, generation, expenditure and revenue for FY 2014-15.

The performance of FY 2014-15 (revised estimate) is compared with the ARR for FY 2014-15 approved vide Commission's order dated 22.08.2014.

The Commission has analyzed the energy sales, energy generation and components of expenditure and revenue in the Review for FY 2014-15 in this chapter.

3.2 Energy Demand (Sales)

3.2.1 Metered Energy Sales

The Commission in the Tariff Order for FY 2014-15 approved metered energy sales within the State at 29036 MU against 29176 MU projected by PSPCL in the ARR for FY 2014-15.

PSPCL has estimated energy sales of metered categories for FY 2014-15 on the basis of actuals for the first six months (April, 2014 to September, 2014) and by applying category-wise half-yearly 3 year compounded annual growth rate (CAGR) of second half of the period from FY 2010-11 to FY 2013-14, to the corresponding actual category-wise energy sales in the second half of FY 2013-14.

The Commission has estimated sales to metered categories on the basis of actual sales for the first six months of FY 2014-15 (April, 2014 to September, 2014) and by applying category-wise half-yearly CAGR of second half of the period from FY 2010-11 (actual) to FY 2013-14 (actual, but unaudited) to the corresponding category wise sales of second half for FY 2013-14. Accordingly, the Commission has worked out the estimated sales to metered categories as 29824 MU for FY 2014-15, as detailed in Table 3.1.

Table 3.1: Estimated Metered Energy Sales for FY 2014-15

(MU)

Sr. No.	Category	Sales during 2nd half of FY 2010-11 (Actual)	Sales during 2nd half of FY 2013-14 (Actual)	3 year CAGR during 2nd half of FY 2010-11 to 2nd half of FY 2013-14	Sales during 1st half of FY 2014-15 (Actual)	Estimated sales during 2nd half of FY 2014-15 (IV+IV*V)	Estimated sales for FY 2014-15 (VI+VII)
I	II	III	IV	V	VI	VII	VIII
1.	Domestic	3834	4880	8.37%	6201	5289	11490
2.	Non-Residential	1178	1405	6.05%	1755	1490	3245
3.	Small Power	421	444	1.79%	473	452	925
4.	Medium Supply	886	947	2.24%	974	968	1942
5.	Large Supply	3912	5179	9.80%	5565	5687	11252
6.	Public Lighting	74	90	6.74%	89	96	185
7.	Bulk Supply	261	301	4.87%	318	316	634
8.	Railway Traction	71	72	0.47%	79	72	151
9.	**Total Metered sales**	**10637**	**13318***		**15454**	**14370**	**29824**

* Against 13320 MU projected by PSPCL in the ARR.

The Commission has retained sales to common pool consumers at 309 MU as projected by PSPCL. PSPCL has projected Outside State sale during FY 2014-15 as 73 MU, comprising of 20 MU of sale through Power Exchange and 53 MU HP royalty in Shanan. Therefore, the Commission considers the Outside State sale as 73 MU and Common Pool sale as 309 MU.

The metered energy sales projected by PSPCL during determination of ARR for FY 2014-15, approved by the Commission in the Tariff Order for FY 2014-15, the revised estimates furnished by PSPCL and energy sales now approved by the Commission for FY 2014-15 are given in Table 3.2.

Table 3.2: Metered Energy Sales approved for FY 2014-15

(MU)

Sr. No.	Category	Projected by PSPCL in ARR for FY 2014-15	Approved by the Commission in T.O. for FY 2014-15	Revised Estimates of PSPCL in ARR for FY 2015-16	Now approved by the Commission
I	**II**	**III**	**IV**	**V**	**VI**
1.	Domestic	11683	11637	11489	11490
2.	Non-Residential	3347	3331	3246	3245
3.	Small Power	981	981	924	925
4.	Medium Supply	1998	1996	1943	1942
5.	Large Supply	10248	10172	11252	11252
6.	Public Lighting	170	170	187	185
7.	Bulk Supply	619	619	633	634
8.	Railway Traction	130	130	153	151
9.	**Total Metered sales within the State**	**29176**	**29036**	**29827**	**29824**
10.	Common Pool sale	289	289	309	309
11.	Outside State sale	129	54	73	73
12.	**Total sales (9+10+11)**	**29594**	**29379**	**30209**	**30206**

Accordingly, the metered sales of 29824 MU within the State, Common Pool sale of 309 MU and Outside State sale of 73 MU are now approved by the Commission as per details shown in Table 3.2.

3.2.2 AP Consumption

As against 11586 MU AP consumption projected by PSPCL in its ARR of 2014-15, the Commission, in its Tariff Order for FY 2014-15, approved AP consumption of 9749 MU after applying 3 year CAGR from FY 2010-11 to FY 2013-14 (RE) of 0.24% over the AP consumption of 9726 MU approved by the Commission for FY 2013-14 (RE) in the Tariff Order for FY 2014-15. In the ARR petition for FY 2015-16, PSPCL has revised the estimate of AP consumption to 10832 MU for FY 2014-15.

In ARR for FY 2015-16, PSPCL has submitted that the actual AP consumption of first 6 months (April, 2014 to September, 2014) is 8213 MU. PSPCL has further submitted that for the next six months (October, 2014 to March, 2015), AP sale has been projected by increasing actual sale of second half of FY 2013-14 (i.e. 2494 MU) by 5%, which comes out to 2619 MU. PSPCL has further submitted that the AP consumption has been enhanced at the rate of 5% as per principles adopted in past. The approach adopted by the Hon'ble Commission in Tariff Order of FY 2014-15 to restrict the same as per CAGR cannot be relied upon as the AP consumption is dependent upon many factors, such as (i) Motor size which has increased over the years in the State of Punjab due to receding of water levels, (ii) increase in number of tubewells leading to increase in total agriculture load, and (iii) due to metrological factors.

PSPCL has further submitted that

(i) AP consumption has been taken based on sample meters as AP consumption based on pumped energy is not a trusted method of calculating the consumption. It is fact that there is always some unauthorized shifting of AP load from AP feeders to nearby 24 hours supply feeders in order to have access to day time supply and extended hours of supply. Further, the computation of AP consumption on pumped energy involves assumptions with respect to losses of agriculture feeder and contribution of AP consumption on mixed load feeders, and any unreasonable assumption shall affect the consumption pattern adversely to PSPCL. Further, it is already a proven fact that for working out final output on the basis of reverse computation only is not a prudent method of computation. This principle of calculation is not being applied by any of the SERCs. Further, there is hardly any State except one or two which has 100% metering of agriculture consumers and wherever it is existing, 100% readings of the same have never been ensured and accordingly insistence of PSERC to adopt pumped energy methodology may kindly be not applied.

(ii) Hon'ble Commission is wrongly taking AP consumption of Kandi area mixed feeders as 30% of the total consumption, whereas PSPCL has calculated the same as 45% of the total consumption as attached in Volume II of the Petition. PSPCL has supplied detailed calculations to this effect to PSERC vide its Memo No. 2944/CC/DTR-121/Vol.11/TR-II dated 23.12.2013.

(iii) Hon'ble Commission had assumed the losses of AP feeders by deducting 2.5% losses of transmission level and 15% of the distribution losses as sub-transmission level losses, which is not based on the facts, and in fact, the losses of AP feeders are nowhere more than 8.5% to 9%, as there is no question of any commercial loss, and rather the pumped energy being recorded is lesser to the extent that there is unauthorised tapping for urban pattern supply feeders by AP consumers.

PSPCL has further submitted that the escalation of 5% for projections of AP consumption is quite justified as the same is always subject to true up.

Accurate assessment of AP consumption has been one of the most important parameter while preparing the energy account of the distribution licensee as it affects not only the T&D loss level but also agriculture subsidy being paid by the State Government. Both these factors are reflected in the tariff determined by the Commission for different categories of consumers thereby affecting the consumers in particular and public at large.

Various consumer representatives during public hearings have been raising the issue of fudging of AP consumption by PSPCL and alleged that the utility is showing higher agriculture consumption to project lower T&D losses. Punjab Government has also from time to time conveyed its serious concern on this issue and asked the Commission to take appropriate steps to accurately assess the agriculture consumption. Although, Electricity Act 2003 mandates 100% metering of all consumers and the Commission has also been issuing directions to the PSPCL to prepare a time bound roadmap to achieve this goal but due to non-compliance of the directives by PSPCL, the option before the Commission has been to estimate the AP consumption as accurately as possible on the basis of available data from various sources.

The Commission, in the Tariff order for FY 2013-14, while working out the AP consumption from the monthly AP data submitted by PSPCL to the Commission, on the basis of load of AP connections and supply hours, observed that in many cases, the AP consumption recorded by the sample meters is almost the same as worked out on the basis of load of AP connections and supply hours. This indicated that the readings of the sample meters were not recorded correctly. Further, the energy pumped shown in AMR data submitted by PSPCL every month for 25 number AP feeders per circle of PSPCL showed considerable difference when compared with the AP consumption calculated by PSPCL on the basis of AP factor, which in turn was calculated by PSPCL on the basis of sample meter readings. In order to further examine the authenticity of the sample meters data, the Commission asked PSPCL to supply the details of energy pumped for AP supply during FY 2012-13. PSPCL supplied the information regarding month wise and division wise details of number of feeders, energy pumped and load, giving separate figures for AP 3-phase 3-wire feeders, AP 3-phase 4-wire feeders and Kandi Area mixed feeders feeding AP load. After scrutiny of the data from

April 2012 to December 2012, it was observed that during the months of April, May, November & December, 2012 more than 40% divisions of PSPCL had claimed AP consumption even more than the input energy. Similar trends were observed from the scrutiny of the data for FY 2010-11 and FY 2011-12. Accordingly, on the basis of the pumped energy data supplied by PSPCL, the Commission estimated AP consumption during review of FY 2012-13 as 10687 MU, in the Tariff order for FY 2013-14.

Further, during processing of ARR for FY 2014-15, PSPCL vide its letter no. 2944/CC/DTR-121/Vol.II/TR-II dated 23.12.2013 requested the Commission to consider 45% of the total pumped energy of mixed Kandi Area feeders for assessing the consumption of AP consumers being fed from mixed Kandi Area feeders (instead of 30% as taken by the Commission for assessing AP consumption in the Tariff Order for FY 2013-14), on the plea that although the percentage of sanctioned load of AP consumers fed from mixed Kandi Area feeders is around 30% but the pumped energy to the AP consumers is around 45% of the total pumped energy. The above reasoning submitted by PSPCL was not found convincing by the Commission, and PSPCL was accordingly asked to submit comments on the observations of the Commission in the matter vide letter no. 702/PSERC/DTJ/105 dated 20.01.2014. But, PSPCL did not submit its comments in the matter, and also presuming that PSPCL had nothing more to say in the matter, the Commission estimated and approved the AP consumption for FY 2010-11 (true-up), FY 2011-12 (true-up) and FY 2013-14 (review) in the Tariff Order for FY 2014-15.

In the ARR for FY 2015-16, PSPCL has again submitted that the Hon'ble Commission is wrongly taking pumped energy to AP consumers fed from Kandi Area mixed feeders as 30% of the total consumption whereas PSPCL has calculated the same as 45% of the total consumption as attached in Volume II of this petition. PSPCL further submitted that it has supplied detailed calculations to this effect to the Commission vide its memo no. 2944/CC/DTR-121/Vol.II/TR-II dated 23.12.2013. The Commission again asked PSPCL vide its letter no. 13476 dated 09.12.2014 to supply its comments on the observations of the Commission in the matter conveyed to PSPCL vide letter no. 702 dated 20.01.2014. The reply submitted by PSPCL vide its letter no. 1246 dated 15.12.2014 did not cover the various observations raised by the Commission in its letter no. 702 dated 20.01.2014. Further, the various figures shown in PSPCL's letter dated 15.12.2014 were found to be in variance with the figures mentioned in the ARR petition for FY 2015-16 (Vol.II). PSPCL was accordingly asked vide Commission's letter no. 13862 dated 26.12.2014 to check up the data and clarify the above deficiencies. PSPCL was also requested vide Commission's letter no. 13862 dated 26.12.2014 to elaborate the methodology used to work out feeder wise AP consumption submitted vide its letter no. 2944 dated 23.12.2013. The reply submitted by PSPCL vide its letter no. 2051 dated 22.01.2015 was not found convincing. The various observations in the matter of AP consumption of Kandi Area mixed feeders were conveyed to PSPCL vide Commission's letter no. 21233 dated 19.02.2015. For more accurate assessment of agriculture consumption in kandi areas, PSPCL was directed in TO for FY 2013-14 that AP load of Kandi area feeders fed from mixed feeders should be segregated and in case of any practical difficulty, all AP motors of such feeders should be metered during the year 2013-14. This directive was reiterated in the Tariff Order for FY 2014-15, but PSPCL has failed to implement the directions of the Commission.

During final presentation on 19.02.2015, PSPCL objected to the methodology of estimation of AP consumption by the Commission on the basis of pumped energy instead of on the basis sample meters. The Commission desired that PSPCL may separately give presentation on this issue. PSPCL presented its view point on the issue of estimation of AP consumption on 11.03.2015 at the Commission's office, and submitted its written submissions vide its letter no. 2128 dated 17.03.2015. The submissions made by PSPCL vide its letter dated 17.03.2015 centered on the following:

(i) Estimation of AP consumption of Kandi area AP connections:

PSPCL through its submissions has tried to justify its claim that 45% of the AP pumped energy should be accounted for towards AP pumped energy as far as AP connections in Kandi area are concerned.

(ii) Assuming sub-transmission loss as 15% of distribution loss:

PSPCL has submitted that assuming of sub-transmission loss as 15% of distribution loss is not fair, as keeping in view the length of the transmission system as 6371 km and 8176 km of sub-transmission system, the sub-transmission losses have been taken on much lower side.

(iii) Shifting of AP load on non AP feeders and some AP load run on UPS feeders (unauthorisedly) by some consumers has also not been accounted for in the pumped energy methodology, which is well accounted for in the sample meters methodology.

In view of the submissions made in its letter dated 17.03.2015, PSPCL has desired to revisit/reconsider the pumped energy methodology as the method of computation of AP consumption on the basis of sample meters is long tested, accepted and gives fair assessment of AP energy.

There is nothing new in the submissions made by PSPCL in its presentation on 11.03.2015 and its letter dated 17.03.2015 than the submissions made by PSPCL in its ARR and its subsequent communications as brought out above. No concrete/authenticated data has been submitted by PSPCL in support of its submissions.

The endeavour of the Commission has always been to determine the AP consumption as accurately as possible and near to actual. Punjab is one of the few states in the country where the agricultural load has been segregated from other mixed rural load. The input energy of 100% 11 kV agriculture feeders is recorded daily at the grid-substations and is available for verification. On the other, the authenticity of sample meters data installed on less than 10% agriculture motors spread across the state has always remained doubtful and found to be inaccurate during validation in the past. In the absence of 100% metering, as envisaged in Section 55 of the Electricity Act 2003, estimation of AP consumption on pumped energy is far more accurate than sample meter methodology.

The assumption of sub-transmission losses as 15% of the distribution losses is as per regulation 30(2) of the PSERC (Terms & Conditions of Intra-State Open Access) Regulations 2011. PSPCL has never raised any objection on this provision of the regulation. However, it is apprehended that due to high incidence of unauthorised running of AP motors, particularly during paddy season, the T&D losses on the AP feeders may be much higher than assumed for calculating AP consumption. To accurately assess the T&D loss level in AP sector, PSPCL is directed to cover atleast 5% of the AP feeders under 100% metering spread across the State by December, 2015 and to engage an independent agency to collect data of pumped & billed energy to calculate T&D losses of these feeders on regular basis.

Regarding unauthorised shifting of AP load to nearby UPS feeders, as submitted by PSPCL, it is the duty of the utility to check malpractices to protect its commercial interests and cannot be used as an alibi to justify the methodology of sample meters.

The Hon'ble APTEL in case of Appeal Nos. 142 of 2013 and 168 of 2013 filed by Mawana Sugars Ltd. and Bansal Alloys & Metals (P) Ltd. and others respectively, has observed and decided as under, in the matter of unmetered AP consumption approved by the Commission in the Tariff Order for FY 2013-14.

"21. We find that PSPCL estimated the AP consumption of 11456 MU for FY 2012-13. The State Commission after scrutinizing the detailed data obtained from PSPCL regarding month-wise and division wise details of feeders, energy pumped and load, etc., revised the approved energy consumption to 10687 MU as against 10479 MU approved in the tariff order, subject to validation. For FY 2013-14, the State Commission has decided to estimate the AP consumption by applying 5% increase (adhoc) over the AP consumption approved for FY 2012-13. Thus, the State Commission approved energy consumption of 11221 MU as against 12029 MU projected by PSPCL. This is subjected to review on the basis of revised estimates in the next tariff order.

22. We find that the State Commission has estimated the AP consumption after detailed scrutiny of the data. Therefore, we find no reason to interfere in the matter."

PSPCL has filed an Appeal (No. 264 of 2014) against the Tariff Order for FY 2014-15 issued by the Commission, wherein the issue of estimation of AP consumption on the basis of pumped energy has also been raised, and the matter is still pending before the Hon'ble APTEL.

PSPCL has submitted the month wise data of energy pumped for AP supply upto September, 2014 in the ARR for FY 2015-16. Further PSPCL vide Director/ Distribution e-mails dated 18.11.2014, 17.12.2014 & 15.01.2015, submitted the data of energy pumped for AP supply for the months of October, 2014, November, 2014 & December, 2014 respectively, and supplied additional information vide letter no. 1229 dated 09.12.2014. It has been observed that from April, 2014 to December, 2014, PSPCL has claimed 482.11 MU on average basis on account of defective meters or some other reasons. On validation of this claim at few grid sub-stations, it has been found that average energy has been booked on adhoc basis against agriculture feeders by declaring healthy meters as defective without any report of competent agency on record. The matter needs further investigation before taking a final decision. Meanwhile, the pumped energy booked on average basis during the year is being considered provisionally subject to validation and matter will be revisited during true up.

In view of the above, the Commission, continuing with the methodology of determining AP consumption on the basis of energy pumped, decides to estimate AP consumption during FY 2014-15 on the basis of energy pumped for AP supply, as worked out in Table 3.3 PSPCL is again advised to implement the directions of the Commission issued in the Tariff Order for FY 2013-14 and reiterated in the Tariff Order for FY 2014-15 & this Tariff Order with respect to assessment of agriculture consumption.

Table 3.3: AP Consumption for FY 2014-15

(MU)

Sr. No.	Description	Energy
(i)	Energy pumped during April, 2014 to December, 2014 in case of 3-phase 3-wire AP feeders	9751.54
(ii)	Energy pumped during April, 2014 to December, 2014 in case of 3-phase 4-wire AP feeders	9.74 [a]
(iii)	Energy pumped during April, 2014 to December, 2014 in case of Kandi area mixed feeders feeding AP load	428.52 [b]
(iv)	Total energy pumped during April, 2014 to December, 2014 for AP supply {(i)+ (ii)+ (iii)}	10189.80
(v)	Estimated energy pumped for AP supply from January, 2015 to March 2015	1278.74 [c]
(vi)	Total estimated energy pumped for AP supply during FY 2014-15 {(iv)+ (v)}	11468.54
(vii)	Less losses @11.39% (16-(2.5+15% of 14.08)) MU {(vi) x11.39%}	1306.27 [d]
(viii)	Net estimated AP consumption for FY 2014-15 {(vi) - (vii)}	10162.27
(ix)	AP consumption estimated for load of 86.17 MW running on Urban Feeders [not included at Sr.No.(viii) above] {(viii)x 86.17/8643.51}	101.31 [e]
(x)	**Total AP consumption estimated for FY 2013-14 {(viii)+ (ix)}**	**10263.58**

(a) Calculated by multiplying the number of 3-phase 4-wire AP feeders for each month with AP consumption per feeder for that month in case of 3-phase 3-wire AP feeders.

(b) Calculated by assuming the AP load on Kandi area mixed feeders feeding AP load as 30%.

(c) Calculated by multiplying the total energy pumped (as worked out at Sr. No. (iv)) with 11.15% (average of the percentages of AP consumption during the last three months to the first nine months of FY 2011-12, FY 2012-13 and FY 2013-14).

(d) The loss @11.39% (11 kV and below) for FY 2014-15 has been computed from para 3.3.

(e) AP load running on 3-phase 3-wire, 3-phase 4-wire and Kandi Area mixed feeders is 8643.51 MW and load of AP metered connections (running on urban feeders) is 86.17 MW ending September, 2014 as per PSPCL letter no. 1229 dated 09.12.2014.

Thus, the Commission approves the AP Consumption of 10263.58 MU (say 10264 MU) for FY 2014-15, against 10832 MU projected by PSPCL.

3.2.3 Total Energy Sales for FY 2014-15

The total energy sales as per Revised Estimates (RE) projected by PSPCL in its ARR Petition and now approved by the Commission for FY 2014-15 are given in Table 3.4.

Table 3.4: Total Energy Sales for FY 2014-15

(MU)

Sr. No.	Particulars	Energy sales (RE) by PSPCL for FY 2014-15	Energy sales approved by the Commission for FY 2014-15
I	**II**	**III**	**IV**
1.	Metered sales	29827	29824
2.	AP consumption	10832	10264
3.	Total sales within State	**40659**	**40088**
4.	Common pool sale	309	309
5.	Outside State sale	73	73
6.	**Total**	**41041**	**40470**

The Commission approves the total energy sales at 40470 MU for FY 2014-15.

3.3 Transmission and Distribution Losses (T&D Losses)

In its ARR petition for FY 2014-15, PSPCL had projected Transmission and Distribution losses at 16% for FY 2014-15. The Commission fixed the T&D losses at 16% for FY 2014-15 in the Tariff Order for FY 2014-15, after considering the submissions made by PSPCL in the ARR for FY 2014-15 and AP consumption approved by the Commission for FY 2014-15. In the ARR petition for FY 2015-16, PSPCL has projected Transmission and Distribution losses at 16.50% for FY 2014-15.

PSPCL has submitted in the ARR for FY 2015-16 that it has worked out the T & D losses occurring in its network on the basis of actual power purchase and sales data available for FY 2013-14, revised estimates of sales and power purchase for FY 2014-15 and projections for FY 2015-16. PSPCL has submitted that an analysis of the methodology for consideration of actual losses in the last Tariff Order of PSPCL suggests that the Hon'ble Commission disallows the sales pertaining to AP consumption and adds such disallowed sales to the T&D losses. PSPCL has prayed to approve the actual AP sales in accordance with the Annual Audited Accounts. PSPCL has further submitted that the Hon'ble Commission has fixed the trajectory of reduction of the T&D losses considering the AP consumption on the basis of sample meter reading. However, the approach of approving the T&D losses based on AP pumped energy consumption itself is contrary to Hon'ble Commission's trajectory of reduction in T&D losses as without revising the trajectory, the same has proved detrimental to PSPCL. PSPCL has further submitted that steps are being taken to reduce the distribution loss through various loss reduction and network planning initiatives. PSPCL has stated that considering the geographical spread of the service area and consumer base of PSPCL, loss level of 16.89% has been achieved during FY 2013-14, which is indicative of the efficient performance of PSPCL. Efforts to reduce losses below these levels would require huge investments and appropriate cost benefit analysis is essential as return in the form of loss reduction may not justify the investments in certain cases. PSPCL has further submitted that it has achieved the T&D loss level of 16.89%, which includes transmission loss of 2.50%. PSPCL's distribution loss level of 14.39% (excluding 2.5% of transmission loss) has already been at stagnancy and at this stage, it is important to maintain the current loss level as further reduction would be difficult. PSPCL has submitted that driven by the targets and directives given by the Hon'ble Commission, PSPCL is making concerted efforts to reduce and control the losses and is already recognized at par with some of the efficient utilities of the Country. PSPCL has prayed that the T&D loss level of 16.50%, as projected for FY 2014-15, be approved for the purpose of determination of ARR.

The Commission, in para 3.2.2 has determined and approved AP consumption as 10264 MU for FY 2014-15. As brought out in para 3.2.2, the Commission has determined the AP consumption on the basis of energy pumped to the AP consumers as the AP consumption projected by PSPCL on the basis of sample meters has not been found to be correct. The endeavour of the Commission has always been to determine the AP consumption as accurately as possible and near to actual. The estimation of AP consumption on the basis of pumped energy is far more accurate than sample meter methodology. As such, the contention of PSPCL in this regard cannot be accepted by any imagination.

There is no reason for the Commission to refix T&D losses at 16.50% as prayed by PSPCL in the ARR, since the consumers cannot be made to suffer due to inability of PSPCL to achieve the target T&D loss level of 16.00% fixed by the Commission. The Commission, therefore, decides to retain T&D losses at 16.00%, as fixed by the Commission for FY 2014-15 in the Tariff Order for that year.

Keeping the overall T&D loss level of 16.00% as approved for FY 2014-15 in the Tariff Order for that year and based on the provisionally approved transmission loss of 2.5% for PSTCL for FY 2014-15 in the Tariff Order for PSTCL for FY 2015-16, the target distribution loss (66kV and below) for PSPCL for FY 2014-15 works out to 14.08% (Refer Table 3.5), which the Commission approves. The Commission will revisit the distribution loss of PSPCL while undertaking the True up for FY 2014-15.

3.4 Energy Requirement

3.4.1 The total energy requirement to meet the demand of the system is the sum of estimated metered sales including Common Pool and Outside State sales, estimated AP consumption and T&D losses. The total energy requirement for FY 2014-15 projected in the ARR for FY 2014-15, approved by the Commission in the Tariff Order, revised estimates furnished by PSPCL in the ARR for FY 2015-16 and now approved by the Commission are given in Table 3.5.

Table 3.5: Energy Requirement for FY 2014-15

(MU)

Sr. No.	Particulars	Projected by PSPCL in ARR for FY 2014-15	Approved by the Commission in T.O. for FY 2014-15	Revised Estimates by PSPCL for FY 2014-15 in ARR for FY 2015-16	Now approved by the Commission for FY 2014-15
I	II	III	IV	V	VI
1.	Metered sales within the State	29176	29036	29827	29824
2.	AP consumption	11586	9749	10832	10264
3.	**Total sales within the State (1+2)**	**40762**	**38785**	**40659**	**40088**
4.	Common pool sale	289	289	309	309
5.	Outside State sale	129	54	73	73
6.	**Total sales (3+4+5)**	**41180**	**39128**	**41041**	**40470**
7(a).	T&D losses on Sr.No.3 (%)	16.00%	16.00%	16.50%	16.00%
7(b).	T&D losses on Sr. No.3	7764	7388	8034	7636
8.	**Total energy input required [6+7(b)]**	**48944**	**46516**	**49075**	**48106**
9.	**Energy at transmission periphery to be sold within the State (8-4-5)**		**46173**		**47724**
10(a).	Transmission loss (%)		2.50%		2.50%
10(b).	Transmission loss		1154		1193
11.	Energy available to PSPCL (9-10 (b) – Sales at 132kV and above level *)		43988		45761
12(a).	Distribution loss (7(b)-10(b))		6234		6443
12(b).	Distribution loss (%)		14.17%		14.08%
13.	**Energy available for sale to consumers within the State** [11-12 (a) **+** Sales at 132kV and above level *]		**38785**		**40088**

** 1031 MU (estimated sale projected by PSPCL in ARR for FY 2014-15) and 770 MU (revised estimated sale projected by PSPCL in ARR for FY 2015-16).*

3.4.2 The revised energy requirement for FY 2014-15 with T&D losses of 16.00% is determined as 48106 MU, which has to be met from PSPCL's own generation (thermal and hydel), including share from BBMB, purchase from Central Generating Stations and other sources.

3.5 PSPCL's own generation

3.5.1 Thermal Generation

PSPCL has estimated the revised gross generation of GNDTP, GGSSTP and GHTP for FY 2014-15 based on actual generation of the respective plants up to September, 2014 and estimated the generation for the second half of FY 2014-15 on the basis of planned and forced outages of the respective plants.

PSPCL has submitted actual gross generation from April, 2014 to September, 2014 in the ARR for FY 2015-16. The Commission vide letter no. 19729 dated 14.01.2015 sought from PSPCL, the actual generation of different thermal generating stations from October, 2014 to December, 2014 and the projected generation from January, 2015 to March, 2015. PSPCL vide its letter no. 47 dated 20.01.2015 submitted the generation data from October, 2014 to December, 2014 and projected generation from January, 2015 to March, 2015. The actual generation and projected generation are summarized in Table 3.6.

Table 3.6: Actual & Projected Gross Thermal Generation for FY 2014-15

(MU)

Sr. No.	Station	Actual gross generation from Apr., 2014 to Sept., 2014 *	Actual gross generation from Oct., 2014 to Dec., 2014 **	Projected gross generation from Jan., 2015 to Mar., 2015 **	Total gross generation (III+IV+V)
I	**II**	**III**	**IV**	**V**	**VI**
1.	GNDTP	1013	253	478	1744
2.	GGSSTP	4020	996	1809	6825
3.	GHTP	2784	879	1577	5240
4.	**Total**	7817	2128	3864	13809

** submitted by PSPCL in the ARR for FY 2015-16.*
*** submitted by PSPCL vide its letter no. 47 dated 20.01.2015*

PSPCL has submitted in the ARR petition for FY 2015-16 that

(i) Power availability from its own thermal generating stations i.e. GNDTP, GGSSTP, and GHTP for FY 2014-15 has been projected on the basis of various parameters such as plant load factor, gross generation and auxiliary consumption.

(ii) The actual availability of GNDTP during FY 2014-15 has been estimated based on schedule of operation for the period. The actual plant availability for GNDTP for first half (H1) of FY 2014-15 has been considered for effective capacity in operation. Unit 4 of GNDTP has been available on

27.09.2014 (CoD) after completion of its R&M. The plant availability of GNDTP has been considered for second half (H2) of FY 2014-15 based on the maintenance/overhauling schedule.

(iii) The plant availability of GHTP and GGSSTP for second half of FY 2014-15 are based on the actual plant availability figures attained till H1 of FY 2014-15 and the planned maintenance schedule. Plant availability of GGSSTP and GHTP for H1 of FY 2014-15 is above 85%.

(iv) Plant availability for H2 of FY 2014-15 has been estimated to be above 85% for all the plants, except GNDTP. In case of GNDTP, estimated plant availability is marginally lower at 84.79%.

In view of the above, the Commission approves thermal generation of 13809 MU as projected by PSPCL in the ARR and worked out in Table 3.6.

Auxiliary energy consumption and net generation: The plant-wise auxiliary energy consumption projected by PSPCL during determination of ARR for FY 2014-15, auxiliary energy consumption approved by the Commission in the Tariff Order for FY 2014-15, the revised figures projected by PSPCL in the ARR petition for FY 2015-16, and now approved by the Commission are given in Table 3.7.

Table 3.7: Auxiliary energy consumption for FY 2014-15

Sr. No.	Station	Projected by PSPCL in ARR for FY 2014-15	Approved by the Commission in T.O. for FY 2014-15	RE by PSPCL in ARR for FY 2015-16	Now approved by the Commission
I	II	III	IV	V	VI
1.	GNDTP	11.00%	11.00%	Apr.,14-Sept.,14 (11.00%) Oct.,14-Mar.,15 (11.00%)	11.00%
2.	GGSSTP	8.50%	8.50%	Apr.,14-Sept.,14 (8.34%) Oct.,14-Mar.,15 (8.50%)	8.50%
3.	GHTP	8.50%	8.50%	Apr.,14-Sept.,14 (8.71%) Oct.,14-Mar.,15 (8.50%)	8.50%

PSPCL has submitted that Hon'ble APTEL in its Judgment dated 18th October, 2012 held as follows:

"…It appears to us that the Commission is not oblivious of the provisions of the Central Electricity Regulatory Commission Regulations. It is established that the Central Electricity Regulatory Commission Tariff Regulations, 2009 has provided auxiliary consumption at 12%. If the circumstances applicable to Tanda Stations are applicable to and are not different from GNDTP units then there will be not too

much of rationale in deviation from the Central Electricity Regulatory Commission norms."

PSPCL has submitted that from the above reference it can be seen that the norm for auxiliary consumption for GNDTP station of 110 MW/120 MW unit sets should be benchmarked with that applicable for Tanda station at 12% in accordance with the provisions of the State Regulations as linked with the CERC norms. PSPCL has further submitted that in the petition it has considered auxiliary consumption at 11% for convenience of computation as considered by the Hon'ble Commission in past Tariff Orders. PSPCL has prayed the Hon'ble Commission to approve the auxiliary consumption for GNDTP at 12% as per norms applicable to Tanda Central Generating Station.

The Hon'ble APTEL vide its order dated 18.10.2012 had remanded back to the Commission various issues, including Auxiliary Consumption in respect of GNDTP station, for passing appropriate order. The Commission in its suo-motu compliance order dated 07.01.2013, compositely determined auxiliary consumption for all four units of GNDTP at 11%. The Commission in its review order dated 28.03.2013 in petition no. 10 of 2013 did not allow further relief to PSPCL in the matter of auxiliary consumption of GNDTP. PSPCL has filed an appeal (no. 174 of 2013) with the Hon'ble APTEL against Commission's order dated 28.03.2013. The order in the matter of appeal no. 174 of 2013 has been pronounced by the Hon'ble APTEL on 22.04.2015 and found no infirmity in the order of the Commission regarding fixing of 11% auxiliary consumption for GNDTP.

However, in the Tariff Order for FY 2014-15, the Commission had adopted the CERC norms for assessment of net generation for GGSSTP and GHTP, and considered the various issues and submissions regarding the auxiliary energy consumption of GNDTP units in para 6.4.1 of the Tariff Order for FY 2014-15, and accordingly fixed the auxiliary energy consumption for FY 2014-15 at 11%, 8.50% and 8.50% for GNDTP, GGSSTP and GHTP respectively. PSPCL has also projected these levels of Auxiliary Consumption in its ARR for FY 2015-16.

The Commission, therefore, approves auxiliary consumption for GNDTP, GGSSTP and GHTP at the level already approved in the Tariff Order for FY 2014-15 i.e. at 11%, 8.50% and 8.50% respectively.

The station-wise generation projected by PSPCL during determination of ARR for FY 2014-15, generation approved by the Commission in its Tariff Order for that year, revised estimates supplied by PSPCL in the ARR for FY 2015-16, subsequent information supplied by PSPCL and the generation now approved by the Commission are given in Table 3.8.

Table 3.8: Thermal Generation for FY 2014-15

(**MU)**

Sr. No.	Station	Projected by PSPCL in ARR for FY 2014-15		Approved by the Commission in T.O. for FY 2014-15		Revised Estimates as per ARR for FY 2015-16		Revised Estimates for FY 2014-15 (as per Col. VI of Table 3.6)	Now approved by the Commission	
		Gross	Net	Gross	Net	Gross	Net	Gross	Gross	Net
I	II	III	IV	V	VI	VII	VIII	IX	X	XI
1.	GNDTP	3172	2823	3062	2725	2283	2032	1744	1744	1552
2.	GGSSTP	9500	8693	9808	8974	8177	7488	6825	6825	6245
3.	GHTP	6855	6272	7221	6607	5955	5443	5240	5240	4795
4.	**Total**	**19527**	**17788**	**20091**	**18306**	**16415**	**14963**	**13809**	**13809**	**12592**

The Commission approves gross and net thermal generation for FY 2014-15 at 13809 MU and 12592 MU respectively.

3.5.2 **Hydel Generation**

PSPCL, in the ARR petition for FY 2014-15, projected the net hydel generation including BBMB share at 8832 MU for FY 2014-15. The Commission, in its Tariff Order for FY 2014-15, approved the net hydel generation including BBMB share at 8970 MU. PSPCL, in its ARR petition for FY 2015-16, has submitted the revised net hydel generation at 8780 MU for FY 2014-15.

PSPCL has submitted in the ARR for FY 2015-16 that the availability from hydel plants for FY 2014-15 has been re-estimated on the basis of the actual generation during the first half of FY 2014-15 and the revised generation target estimated for the respective hydel plants for the second half of FY 2014-15 are based upon last three years average for FY 2011-12 to FY 2013-14 for the corresponding months.

The Commission vide letter no. 19729 dated 14.01.2015 sought from PSPCL, the actual generation of different hydel stations from October, 2014 to December, 2014 and projected generation from January, 2015 to March, 2015. PSPCL vide its letter no. 47 dated 20.01.2015 submitted the generation data from October, 2014 to December, 2014 and projected generation from January, 2015 to March, 2015.

The actual generation from April, 2014 to December, 2014 and projections for January, 2015 to March, 2015 as reported by PSPCL, are summarized in Table 3.9.

Table 3.9: Actual Gross Hydel Generation from April, 2014 to December, 2014 and projected Hydel Generation from January, 2015 to March, 2015

(MU)

Sr. No.	Station	Actual gross generation from Apr., 2014 to Sept., 2014*	Actual gross generation from Oct., 2014 to Dec., 2014**	Projected gross generation from Jan., 2015 to March, 2015**	Total gross generation
I	**II**	**III**	**IV**	**V**	**VI=III+IV+V**
1.	Shanan	371	63	48	482
2.	UBDC	248	62	43	353 #
3.	RSD	1391	233	105	1729
4.	MHP	475	377	263	1115
5.	ASHP	415	92	159	666
6.	Micro Hydel	5	2	1	8
7.	**Gross own hydro**	**2905**	**829**	**619**	**4353**

** submitted by PSPCL in the ARR for FY 2015-16.*
*** submitted by PSPCL vide its letter no. 47 dated 20.01.2015*
 # UBDC Stage-I 146 MU, UBDC Stage-II 207 MU.

The Commission has worked out net hydel generation for FY 2014-15 by deducting the auxiliary consumption, transformation losses and free HP share in RSD as indicated in Table 3.10. HP royalty in Shanan has not been deducted from the gross hydel generation as the same has been considered as Outside State sale in para 3.2.1, since some revenue is earned from this sale.

The total availability of station-wise hydel generation as projected by PSPCL in the ARR for FY 2014-15, generation approved by the Commission in the Tariff Order for FY 2014-15, the revised estimates submitted by PSPCL in the ARR for FY 2015-16, subsequent information submitted by PSPCL and the generation now approved by the Commission are given in Table 3.10.

Table 3.10: Hydel Generation for FY 2014-15

(MU)

Sr. No.	Station	Projected by PSPCL in ARR for FY 2014-15	Approved by the Commission in T.O. for FY 2014-15	Revised Estimates by PSPCL in ARR for FY 2015-16	Now Approved by the Commission
I	II	III	IV	V	VI
1.	Shanan	451	518	482	482
2.	(a) UBDC Stage I	155	153	146	146
	(b) UBDC Stage II	179	189	207	207
3.	RSD	1716	1698	1729	1729
4.	MHP	1323	1362	1115	1115
5.	ASHP	741	729	666	666
6.	Micro Hydel	8	7	8	8
7.	**Total own generation (Gross)**	**4573**	**4656**	**4353**	**4353**
8.	Less Auxiliary consumption and transformation loss	42	38	26#	36
9.	Less HP share in RSD	**75**	78	88#	80
10.	Less HP Royalty in Shanan	54			
11.	**Total own generation (Net) (7-8-9-10)**	**4402**	**4540**	**4239**	**4237**
12.	**PSPCL share from BBMB**				
(a)	PSPCL share excluding common pool share (Net)	4141	4141	4012#	4012
(b)	Add Common pool share	289	289	309#	309
13.	**Net share from BBMB**	**4430**	**4430**	**4321**	**4321**
14.	**Total hydro availability (Net) (Own+BBMB) (11+13)**	**8832**	**8970**	**8560**	**8558**

** Transformation loss @0.5% (22 MU), Auxiliary consumption @0.5% for RSD generation of 1729 MU and UBDC stage-I generation of 146 MU (having static exciters) and @0.2% for others (14 MU).*

*** HP share @4.6% in RSD (80 MU).*

 # As projected in the ARR for FY 2015-16.

The Commission, thus, approves revised hydel generation for FY 2014-15 at 4237 MU (net) from own hydel stations and 4321 MU (net) as share from BBMB, as shown in Table 3.10.

3.5.3 The net availability of thermal and hydel generation approved for FY 2014-15 is depicted in Table 3.11.

Table 3.11: Net availability of Thermal and Hydel Generation approved for FY 2014-15

(MU)

Sr. No.	Thermal and Hydel Generation	Net Generation
I	**II**	**III**
1.	Thermal	12592
2.	Hydel	
(a)	Own generation	4237
(b)	Share from BBMB (including Common Pool share)	4321
(c)	Total Hydel (Own + BBMB)	**8558**
3.	**Total (Thermal + Hydel) availability**	**21150**

3.6 Power Purchase

To meet the energy requirement, PSPCL had projected power purchase at 22324 MU (net) in the ARR for FY 2014-15. The Commission, in its Tariff Order for FY 2014-15, approved power purchase at 19240 MU (net) for FY 2014-15. PSPCL has now furnished revised estimates of power purchase for FY 2014-15 at 25332 MU (net) in its ARR petition for FY 2015-16. The approved total energy requirement during FY 2014-15 including Common Pool sale and Outside State sale and T&D losses are determined as 48106 MU as discussed in para 3.4. The energy available from PSPCL's own generating stations including its share from BBMB is 21150 MU (12592 MU of thermal generation and 8558 MU of hydel generation including share from BBMB) as approved in para 3.5. The balance energy requirement works out to 26956 MU (net), which has to be met through purchases from Central Generating Stations and other sources.

The Commission, therefore, approves the revised power purchase at 26956 MU (net) for FY 2014-15.

The matter is further discussed in para 3.9.

3.7 Energy Balance

Details of energy requirement and energy availability projected by PSPCL in its ARR petition for FY 2014-15, approved by the Commission in its Tariff Order for FY 2014-15, revised estimates supplied by PSPCL in the ARR petition for FY 2015-16 and now approved by the Commission are given in Table 3.12.

Table 3.12: Energy Balance for FY 2014-15

(MU)

Sr. No.	Particulars	Projected by PSPCL in ARR for FY 2014-15	Approved by the Commission in Tariff Order for FY 2014-15	Revised Estimates by PSPCL in ARR for FY 2015-16	Now approved by the Commission
I	II	III	IV	V	VI
(A)	**Energy Requirement**				
1.	Metered Sales	29176	29036	29827	29824
2.	Sales to Agriculture	11586	9749	10832	10264
3.	**Total Sales within the State**	**40762**	**38785**	40659	40088
4.	T&D Losses (%)	16.00%	16.00%	16.50%	16.00%
5.	T & D Losses	7764	7388	8034	7636
6.	Sale to Common Pool consumers	289	289	309	309
7.	Outside State Sale	129	54	73	73
8.	**Total Requirement**	**48944**	**46516**	**49075**	**48106**
(B)					
9.	Own generation (Ex-bus)				
(a)	Thermal	17788	18306	14963	12592
(b)	Hydel	4402	4540	4459	4237
10.	Share from BBMB (incl. share of common pool consumers)	4430	4430	4321	4321
11.	Purchase (net)	22324	19240	25332	26956
12.	**Total Availability**	**48944**	**46516**	**49075**	**48106**

3.8 Fuel Cost

3.8.1 PSPCL in the ARR petition for FY 2014-15 had projected fuel cost of ₹4997.60 crore for gross generation of 19527 MU. The Commission, in the Tariff Order for FY 2014-15, approved fuel cost of ₹4795.12 crore for gross thermal generation of 20091 MU. PSPCL, in the ARR petition for FY 2015-16, has revised the estimates of fuel cost to ₹4404.51 crore for gross thermal generation of 16415 MU, based on calorific value and price of coal / oil, transit loss of coal, station heat rate of thermal generating stations and specific oil consumption for FY 2014-15, as given in Table 3.13.

Table 3.13: Calorific Value and Price of Coal & Oil, Transit loss of coal, Specific Oil consumption and Station Heat Rate as submitted by PSPCL for FY 2014-15

Sr. No.	Station	Period	As submitted by PSPCL						
			Gross Calorific value of coal (kCal/kg)	Calorific Value of Oil (kCal/lt)	Price of Oil (₹/ KL)	Price of coal excluding transit loss (₹/MT)	Transit Loss (%)	Station Heat Rate (kCal/ kWh)	Specific Oil Consumption (ml/kWh)
I	II	III	IV	V	VI	VII	VIII	IX	X
1.	GNDTP	H1	4131.06	9400	50774.17	3745.67	-1.41	2756.55	2.42
	GNDTP	H2	4100.00	9400	50774.17	3745.67	1.50	2744.78	1.50
2.	GGSSTP	H1	3805.00	9700	49148.03	4147.92	-0.46	2674.75	0.73
	GGSSTP	H2	3750.00	9700	49148.03	4147.92	1.00	2595.26	0.80
3.	GHTP	H1	3944.00	9500	55581.00	3801.66	-0.94	2425.64	0.70
	GHTP	H2	3860.00	9500	55581.00	3801.66	1.00	2438.00	0.50

H1: April, 2013 to September, 2013 & H2: October, 2013 to March, 2014.

3.8.2 With regard to various performance parameters, PSPCL has submitted as under:

A. **Station Heat Rate (SHR)**

(i) For GNDTP, the Hon'ble Commission has approved SHR of 2750 kCal/kWh for FY 2014-15 based on CERC norms for Tanda TPS (after its R&M), as specified in CERC Tariff Regulations, 2014. PSPCL has achieved the SHR of 2756.55 kCal/kWh for H1 of FY 2014-15. In order to maintain the SHR as per CERC norms, PSPCL has considered the SHR of 2744.58 kcal/kWh for H2 of FY 2014-15.

(ii) For GHTP, the Hon'ble Commission has approved different SHR as 2450 kCal/kWh for Unit I & II and 2428 kCal/kWh for Unit III & IV. The approach adopted by the Hon'ble Commission for stipulating SHR for Units is not prudent. The SHR needs to be assessed station wise as some energy from the particular unit such as FO tank heating is used for common services of GHTP units. Also, the SHR increases with aging of the units and is prone to increase during the backing down of units. Accordingly, PSPCL has considered the heat rate of 2438 kCal/kWh for H2 of FY 2014-15. PSPCL has prayed the Hon'ble Commission to consider SHR of 2450 kCal/kWh for GHTP station as a whole.

(iii) For GGSSTP, the Hon'ble Commission has approved the SHR of 2450 kCal/kWh based on CERC norms specified in CERC Tariff Regulations, 2014. The actual SHR achieved in H1 of FY 2014-15 is 2674.75 kCal/kWh, which is higher than the approved figure. Considering the actual performance of Stations, PSPCL has considered the SHR of

2595.26 kCal/kWh for H2 of FY 2014-15.

B. **Price of Coal and Oil**

The weighted average price and calorific value for coal and oil has been estimated to remain same as actual for first half of FY 2014-15. Any variation in fuel price and GCV is pass through as per the recovery of energy and capacity charges provided in Fuel Cost Adjustment in line with PSERC (Conduct of Business) Regulations, 2005 as amended from time to time.

C. **Transit Loss of Coal**

Although the transit losses for all the plants in H1 of FY 2014-15 are negative, it has been observed from past trends that the coal transit losses are inconsistent for all the three plants. The coal transit losses are not within the control of PSPCL and are attributable to the following reasons:

(i) Calibration of measuring instruments:- Weighing of coal at two different locations having different calibration of weighing machines leads to an error more than permissible limits.

(ii) The transit loss occurs because of seasonal variation during the transportation of the coal, which changes the moisture content of the coal during the transportation.

(iii) The transportation of coal happens through open wagons. As soon as, the goods are loaded on the wagon, it becomes owner's risk and railways disown the responsibility. Coal is subject to pilferages at all halts, which is beyond the control of railways.

(iv) During unloading, small quantities of coal get stuck at the edges of the transport wagons due to moisture and remain undelivered to the plant, contributing to transit losses.

(v) PSPCL has considered the normative transit losses of 1.5% for GNDTP and 1% for GHTP & GGSSTP for estimating the fuel cost.

3.8.3 PSPCL has quoted various judgments of Hon'ble APTEL for allowing the technical performance of thermal generating stations at relaxed levels. However, the Commission finds no justification/reason to deviate from the norms/ parameters considered for working out fuel cost for FY 2014-15, in the Tariff Order for that year.

3.8.4 Fuel cost being a major item of expense, the Commission thought it prudent to get the same validated. The calorific value of oil & coal, the price of oil & coal and transit loss of coal validated by the Commission are indicated in Table 3.14. The Commission had decided in the Tariff Order for FY 2014-15 to adopt the GCV of received coal as per CERC Tariff Regulations, 2014, for working out the fuel cost. The calorific value (GCV) as shown under column III of Table 3.14 is the calorific value of received coal. The validated values are based on data from April, 2014 to September, 2014.

Table 3.14: Calorific Value/Price of Coal & Oil and Transit loss of coal as validated by the Commission for FY 2014-15

Sr. No.	Station	As validated by the Commission				
		Calorific value of received coal (kCal/kg)	**Calorific Value of Oil (kCal/lt)**	**Price of Oil (₹/KL)**	**Price of coal (₹/MT) (Excluding Transit Loss)**	**Transit Loss**
I	**II**	**III**	**IV**	**V**	**VI**	**V**
1.	GNDTP	4126.91	9371.63	50774.43	3742.47	-1.41
2.	GGSSTP	3866.98	9791.83	49148.15	4149.88	-0.76
3.	GHTP	3943.78	9858.13	55581.42	3798.07	-0.46

3.8.5 Substantial quantity of coal received from the captive coal mine of PSPCL has been used during FY 2014-15. The Commission has taken the coal quantity received from PANEM (PSPCL's captive coal mine) as submitted by PSPCL. The price of coal and corresponding calorific values given in the ARR petition of PSPCL and those validated by the Commission [Table 3.14] are weighted average values of coal for the months from April, 2014 to September, 2014, including PANEM coal.

3.8.6 The gross generation considered by the Commission in the estimation of fuel cost for FY 2014-15 is 13809 MU. The fuel cost for different thermal generating stations corresponding to generation, now approved by the Commission, has been worked out based on the parameters adopted by the Commission in the Tariff Order for FY 2014-15. Table 3.15 details the fuel cost based on calorific value & price of coal & oil as mentioned in Table 3.14.

3.8.7 No transit loss has been allowed for PANEM coal while arriving at fuel cost as prices according to the contract are on F.O.R. destination basis. In the case of coal other than PANEM coal, transit loss of 1.0% has been allowed by the Commission, which shall be trued up at actual, subject to a maximum of 1.0%.

Table 3.15: Fuel Cost for FY 2014-15

Sr. No.	Item	Derivation	Unit	GNDTP	GGSSTP	GHTP (Units I & II)	GHTP (Units III & IV)	Total
I	II	III	IV	V	VII	VIII	VIII	IX
1.	Generation	A	MU	1744	6825	2400*	2840*	**13809**
2.	Heat Rate	B	Kcal/kWh	2750	2450	2450	2428	
3.	Specific Oil consumption	C	ml/kWh	0.5	0.5	0.5	0.5	
4.	Calorific value of oil	D	kcal/litre	9371.63	9791.83	9858.13	9858.13	
5.	Calorific value of coal	E	kcal/kg	4126.91	3866.98	3943.78	3943.78	
6.	Overall heat	F=(AxB)	Gcal	4796000	16721250	5880000	6895520	
7.	Heat from oil	G=(AxCxD)/1000	Gcal	8172	33415	11830	13999	
8.	Heat from coal	H=(F-G)	Gcal	4787828	16687835	5868170	6881521	
9.	Oil consumption	I=(Gx1000)/D	KL	872	3413	1200	1420	
10.	Transit loss of Coal	J	(%)	1	1	1	1	
11.	Total coal consumption excluding transit loss	K=(H*1000)/E	MT	1160148	4315470	1487956	1744905	
12.	Quantity of PANEM coal	L	MT	956070	942976	331873#	392716#	
13.	Quantity of coal other than PANEM coal	M=K-L	MT	204078	3372494	1156083	1352189	
14.	Quantity of coal other than PANEM coal including transit loss	N=M/(1-J/100)	MT	206139	3406560	1167761	1365847	
15.	Total quantity of coal required	O=L+N	MT	1162209	4349536	1499634	1758563	
16.	Price of oil	P	₹/KL	50774.43	49148.15	55581.42	55581.42	
17.	Price of coal	Q	₹//MT	3742.47	4149.88	3798.07	3798.07	
18.	Total cost of oil	R=P x I / 107	₹ crore	4.43	16.77	6.67	7.89	35.76
19.	Total cost of coal	S=O x Q / 107	₹ crore	434.95	1805.01	569.57	667.91	3477.44
20.	**Total Fuel cost**	**T=R+S**	**₹ crore**	**439.38**	**1821.78**	**576.24**	**675.80**	**3513.20**
21.	**Per Unit Cost**	**U=T *10 / A**	**₹ / kWh**	**2.52**	**2.67**	**2.40**	**2.38**	**2.54**

** As intimated by PSPCL.*
 # Worked out on proportionate basis in proportion to generation.

The Commission, therefore, approves the revised fuel cost at ₹3513.20 crore for gross thermal generation of 13809 MU.

3.9 Power Purchase Cost

3.9.1 The Commission, in the Tariff Order for FY 2014-15, approved the power purchase cost of ₹8381.06 crore, comprising of ₹8283.06 crore for purchase of 19809 MU (gross) and ₹98.00 crore to meet the shortfall in RPO compliance through purchase of RE power from outside the State of Punjab & new projects coming up in the State of Punjab or through purchase of RECs. PSPCL, in its ARR petition for FY 2015-16, has given revised estimates of ₹10379.52 crore, inclusive of inter-state transmission charges (payable to PGCIL) of ₹854.31 crore, ₹98.00 crore for purchase of RECs for FY 2014-15, ₹0.23 crore as payment to M/s Marcados (consultant) and ₹279.31 crore as previous payments made during 2014-15. The revised estimates do not include Transmission Charges of ₹895.66 crore payable to PSTCL, which have been claimed separately by PSPCL.

PSPCL has submitted that in order to optimize the cost of power procured, it has scheduled its procurement on the merit order principles. The load profiles during various seasons, technical constraints and avoidable costs after giving due consideration to contractual obligations have been considered for deciding the procurement/generation schedule. The power purchase expenses as determined through such optimal merit order dispatch after due consideration for contractual obligations and technical constraints have been proposed by PSPCL for approval. In addition to availability from own thermal and hydro generating stations, PSPCL is procuring power from Central Generating Stations, PTC, NVVNL, IPPs in the State of Punjab and other sources to meet its energy requirement. The energy projections for second half of FY 2014-15 from all thermal central generating stations with allocated share to PSPCL have been taken the same as for previous year i.e. FY 2013-14, and energy projections from central hydro generating stations with allocated share to PSPCL have been based on the average of energy for the last 3 years i.e. FY 2011-12 to FY 2013-14. Further, energy projections from new projects have been calculated by PSPCL in accordance with CEA Regulations/Designed Energy as mentioned in the power purchase agreement. In case of IPPs in the State of Punjab, the energy availability has been projected by PSPCL based on date of commissioning, availability based on stabilization period and normative plant load factor.

PSPCL has submitted that it shall have surplus energy available from tied up sources from central generating stations and the upcoming IPPs in the State of Punjab. In order to manage demand and maintain energy balance, the surplus energy during second half of FY 2014-15 has been proposed to be surrendered by PSPCL. Surrendering has been proposed as per Merit Order of power purchase from existing thermal and gas generating stations. Merit Order is based upon the variable rates of September, 2014. The surplus power available from IPPs in the State of Punjab has also been proposed to be surrendered as per Merit Order schedule. After surrender of energy, only variable charges have been reduced and fixed/other charges have been assumed the same. In the ARR, PSPCL has projected 6236 MU of surplus power available for surrender.

PSPCL has further submitted that the Power Purchase cost projected in the ARR for FY 2015-16, has been worked out after excluding the adjustment of variable costs for IPPs pertaining to washing, extra transportation, additional cost of fuel due to blending as price of imported coal is still to be approved by the Hon'ble Commission. However, PSPCL has requested the Hon'ble Commission that the same shall be payable as pass through only after resolving of issues by the Competent Authority.

3.9.2 As discussed in para 3.6, the requirement of 26956 MU (net) is to be met through purchase from central generating stations and other sources. The transmission loss external to PSTCL system has to be added to arrive at the quantum of gross energy to be purchased. The Commission in the Tariff Order for FY 2014-15 has considered external losses of 2.87% as against 3.19% proposed by PSPCL. PSPCL has intimated the overall weighted average of actual external losses in the first six months of FY 2014-15 at 1.88%. From October, 2014 to March, 2015, PSPCL has projected overall weighted average of external losses at 3.20%. For full FY 2014-15, PSPCL has projected the overall weighted average external losses at 2.28%. The Commission provisionally approves the external losses at 2.28%, as projected by PSPCL for FY 2014-15, subject to true up. After adding 2.28%, external losses, the gross energy required to be purchased works out to be 27585 MU (26956 MU + external losses of 629 MU).

3.9.3 PSPCL in the ARR for FY 2015-16, has shown power purchase of 18120.79 MU at a total cost of ₹6642.99 crore for the first half of FY 2014-15, including ₹279.31 crore of previous payments made during 2014-15 and ₹0.23 crore paid to M/s Marcados (consultant). The power purchase cost for first half of FY 2014-15 has been taken by PSPCL on actual basis, except the water usage charges for NHPC stations of Salal, Uri, Dulhasti and Sewa-II, as the bills are yet to be received. These charges have been assumed the same by PSPCL as actually paid for the first half of FY 2013-14.

The Commission provisionally approves ₹6363.45 crore for power purchase of 18120.79 MU for the first half of FY 2014-15. The amount of ₹279.31 crore relating to previous payments made during FY 2014-15 has been separately dealt in para 3.19 (Prior Period Expenses). Further, amount of ₹0.23 crore shown as paid to M/s Mercadoes (Consultants) does not relate to Account Head 'Power Purchase Cost' and as such has not been allowed under this Head.

3.9.4 PSPCL has projected power purchase of 7801.22 MU at a total cost of ₹3736.53

crore during 2nd half of FY 2014-15. The assumptions made by PSPCL for projection of power purchase cost for second half of FY 2014-15 are:

(a) Variable charges for all plants supplying power under long term contracts have been assumed the same as actual for the month of September, 2014.

(b) AFC for existing central sector plants has been assumed the same as in first half of FY 2014-15. Income tax charges for Nathpa Jhakri HEP and Teri HEP have been assumed the same as billed in first half of FY 2014-15.

(c) PGCIL charges have been assumed the same as actually billed during first half of FY 2014-15.

(d) Cost of banking has been assumed the same as that for first half of FY 2014-15. Open access charges for banking (export) have been assumed at 12 paise/unit.

(e) For new hydro plants i.e. Rampur HEP of SJVNL and Koldam HEP, energy charges have been assumed as 394 paise/unit.

(f) Rate of energy from Tala HEP is 202 paise/unit as that for first half of FY 2014-15. Further, rate of energy from Malana-II HEP has been taken as 363 paise/unit as per provisional tariff allowed by PSERC and the same as that of first half of FY 2014-15.

(g) For Sasan UMPP, second year tariff of variable price of 57.66 paise/unit and fixed charges of 12.92 paise/unit have been considered.

(h) For Mundra UMPP, 144.31 paise/unit is the variable rate for the month of September, 2014. For second half of FY 2014-15, variable rate of 145.30 paise/unit has been considered. Fixed charges have been assumed pro-rata to those billed in first half of FY 2014-15.

(i) For IPPs in Punjab

   i. For NPL, variable rate of September, 2014 is 247.96 paise/unit and the same variable rate of 247.96 paise/unit has been considered for second half of FY 2014-15.

   ii. For TSPL, variable rate of July, 2014 is 211.81 paise/unit (as the plant has run only for few days in July and has not run otherwise in first half of FY 2014-15) and same variable rate of 211.81 paise/unit has been considered for second half of FY 2014-15.

(j) Energy rates of NRSE power and power through NVVNL have been assumed same as average rate of first half of FY 2014-15.

(k) The surplus energy during second half of FY 2014-15 has been surrendered. Surrendering has been done as per Merit Order of power purchase from existing thermal and gas generating stations. Merit Order is based upon the variable rates of September, 2014. After surrender of energy, only variable charges have been reduced and fixed/other charges have been assumed same.

3.9.5 PSPCL, in the ARR for FY 2015-16, has submitted that it will have 6236 MU excess power during 2nd half of FY 2014-15, which is likely to be surrendered by PSPCL from the tied up sources from Central Generating Stations and other sources, as projected in the ARR for FY 2015-16. The Commission further notes that fixed/capacity charges have to be paid by PSPCL for power to be surrendered out of the allocated share.

3.9.6 The Commission provisionally approves the purchase of power 9464.21 MU (27585-18120.79) at a total cost of ₹4156.20 crore, by adding the cost of ₹419.67 crore of additional energy to be purchased to the tune of 1662.99 MU (for the sake of energy balance) at the average variable rate of power surrendered from Thermal Generating Stations i.e. 252.36 paise/unit, in the total cost of power purchase of ₹3736.53 for purchase of 7801.22 MU for the 2nd half of FY 2014-15 projected by PSPCL in the ARR.

Therefore, the total power purchase cost for FY 2014-15 works out to ₹10519.65 (6363.45+4156.20) crore for purchase of 27585 MU (gross).

3.9.7 PSPCL in the RPO review meeting held on 09.01.2015 intimated that the RE power generated/purchased by it up to September, 2014 is 555.01 MU [512.96 MU (Non-Solar) + 42.05 MU(Solar)]. Out of this, PSPCL proposed to make up for the shortfall in RPO compliance of 87.26MU [50.67 MU(Non-Solar) + 36.59 MU(Solar)] for FY 2013-14 allowed to be carried forward to FY 2014-15 by the Commission for compliance by 31.12.2014. PSPCL further informed that it proposes to buy 6.50 lakh Non-Solar RECs equivalent to 650 MU during FY 2014-15 and intimated that the net RE power including RECs available for RPO compliance for FY 2014-15 (after making up for the shortfall of FY 2013-14) is estimated to be 1769.74 MU [1649.33 MU(Non-Solar)+120.41 MU(Solar)]. Accordingly, considering the input energy available to PSPCL for consumption in its area of distribution of electricity as 46531 MU (45761 MU + 770 MU) for FY 2014-15 and the specified RPO as 3.81% (Non-Solar) & 0.19% (Solar), the RPO for FY 2014-15 comes to 1861.24 MU [1772.83 MU (Non-Solar) + 88.41 MU (Solar)]. Thus, the RPO compliance for FY 2014-15 is estimated as shortfall of 123.50 MU (Non-Solar) and surplus of 32 MU (Solar).

3.9.8 The Commission notes that in the Tariff Order for FY 2014-15, the Commission had provisionally approved the amount of ₹98 crore to meet the shortfall in RPO compliance through purchase of renewable energy or RECs, to be purchased after exhausting all resources for arranging power from renewable energy sources. Now, in the ARR petition for FY 2015-16, PSPCL has also proposed an amount of ₹98 crore for purchase of RECs to meet the shortfall in RPO for FY 2014-15. The Commission notes with concern that four Micro-Hydel Plants of PSPCL at Daudhar, Nidampur, Rohti and Thuhi (total capacity 3.9 MW) are non-functional since long and another 18 (2 x 9) MW MHP Stage-II project in district Hoshiarpur has been delayed considerably. These projects, otherwise, were likely to have contributed renewable energy to the tune of 90 MU annually. **In view of this, the Commission disallows ₹14.00 crore (approximately) required for purchasing Non-Solar RECs at the Floor Price of ₹1500 per REC in lieu of non-availability of the said energy. Accordingly, keeping in view the shortfall in RPO, the Commission provisionally approves the amount of ₹84 crore to meet the shortfall in RPO compliance.**

The Commission, therefore, approves the revised power purchase cost of ₹10603.65 crore, comprising of ₹10519.65 crore for now determined power purchase of 27585 MU (gross) and ₹84.00 crore for purchase of power from RE Sources/RECs.

3.10 Employee Cost

3.10.1 In the ARR Petition for FY 2014-15, PSPCL claimed employee cost of ₹5350.89 crore (net of capitalization of ₹120.00 crore) against which the Commission approved a sum of ₹4286.13 crore in the Tariff Order for FY 2014-15.

3.10.2 In the ARR Petition for FY 2015-16, PSPCL has revised the claim of employee cost to ₹4423.44 crore (net of capitalization of ₹140 crore) for FY 2014-15 inclusive of ₹1703.81 crore on account of terminal benefits, ₹226.03 crore as BBMB share and ₹2633.60 crore as 'other employee cost'.

3.10.3 PSPCL vide memo no. 307/308 dated 28.01.2015 has informed that out of ₹115.53 crore shown under sub-head 'any other expenses' under the head pension payments, ₹67.64 crore relate to pension payments/ terminal benefits and the remaining amount of ₹47.89 crore is related to 'other employee cost'. As such, ₹1655.92 crore are related to terminal benefits, ₹226.03 crore relate to BBMB share and the remaining amount of ₹2681.49 crore is 'other employee cost'. No amount for arrear of pay revision and for progressive funding of terminal benefits has been claimed for FY 2014-15.

3.10.4 Punjab State Power Corporation Limited (PSPCL) challenged the Tariff Order dated 16.07.2012 passed by the Commission for FY 2012-13 before Hon'ble APTEL in Appeal No.174 of 2012, on various grounds. Hon'ble APTEL framed following issues among others:

(i) Whether the State Commission is justified in not allowing the employees cost as claimed by the appellant, in reducing the same by 17.22 ?

(ii) Whether the State Commission is justified in applying the Wholesale Price Index (WPI) to increase in the employees cost and dearness allowance?

The Hon'ble APTEL gave the following findings on the above issues in its Judgment dated 11th September, 2014:

"40.1 *The State Commission has, in the impugned order, wrongly effected a reduction of 17.22% in the employees cost of the appellant on the ground that the employees cost of the appellant are high. The approach of the State Commission in reducing the employees cost to the extent of 17.22% on the ground that the employees cost of the appellant is higher and the appellant does not have control over its employees cost is erroneous and arbitrary. Further, the State Commission is not justified in applying the Wholesale Price Index (WPI) to increase in employees cost and dearness allowance. We do not approve this approach of the State Commission. We agree to the findings laid down by this Appellate Tribunal in its judgments dated 02.03.2012 & 18.10.2012 delivered in Appeal No.76 of 2011 and Appeal No.7, 46 & 122 of 2011 respectively. Thus, both the issues i.e. Issue Nos. (i) & (ii) are allowed by us directing the State Commission to re-examine both these issues in the light of our findings recorded earlier in the judgments dated 02.03.2012 and 18.10.2012 in Appeal No.76 of 2011 and Appeal No.7 of 2011 & batch".*

The Commission sought Review of the above Judgment in Review Petition No.6 of 2015 in Appeal No.174 of 2012. The Review was sought on the ground that above findings of the Hon'ble Tribunal was not in terms of the Regulations of the Commission specifying that the increase in employee cost is to be limited to Wholesale Price Index (WPI) (all commodities) in terms of Regulation 28 of Tariff

Regulations made by this Commission in exercise of powers conferred on it under the Electricity Act, 2003 (No.36 of 2003) having the force of sub-ordinate legislation. The Hon'ble APTEL has dismissed the Review Petition of the Commission by its Order dated 30.03.2015.

The Hon'ble APTEL has decided as under:-

> *"This Appellate Tribunal in its previous judgment also considered the Regulations and the Wholesale Price Index and held that actual costs need to be considered. We after considering the previous judgment and discussion on the said issue at length in our judgment dated 11.09.2014 in the said Appeal No.174 of 2012, after referring to the decision of the State Commission on the Wholesale Price Index, directed that the actual amount spent, subject to prudent check, is to be considered." (Emphasis supplied)*

'Actual amount spent' in the Hon'ble APTEL Judgment, can be considered at the time of True-up only. The Commission allowed actual employee cost in the True-up for FY 2011-12 in Tariff Order for FY 2014-15 based on the provisions in PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 as amended from time to time. Due to non-availability of Audited Annual Accounts for FY 2012-13 and FY 2013-14, the True-up exercise for these years could not be carried out. As the information regarding 'actual amount spent' is not available at the time of projections and review, the Commission has no alternative except to determine the employee cost based on the prevalent PSERC Regulations. Further, the Commission is also considering legal course.

The Commission has, therefore, decided to continue determination of the Employees Cost in this Tariff Order as per its Regulations.

3.10.5 The provisions of the amended Regulation 28(3) of PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 provide for determination of employee cost as under:

- Terminal benefits including BBMB share on actual basis.
- Increase in other employee expenses limited to average increase in Wholesale Price Index.
- Exceptional increase in employee cost on account of pay revision etc. to be considered separately by the Commission.

As terminal benefits and BBMB share of expenditure is allowable on actual basis,

the Commission approves ₹1881.95 (1655.92+226.03) crore as terminal benefits and BBMB share of expenditure.

3.10.6 PSERC vide notification dated 17.09.2012 has amended the PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. Regulation 28 (2) (a) of the amended regulations provides as under:

> *'O&M expenses as approved by the Commission for the year 2011-12 (true-up) shall be considered as base O&M expenses for determination of O&M expenses for subsequent years'.*

As discussed in para 5.10.5 of Tariff Order of PSPCL for FY 2014-15, the Commission has adopted ₹2253.35 crore as base for 'other employee cost' of PSPCL for FY 2012-13. After allowing WPI (monthly average) increase of 5.98% for FY 2013-14, the 'Other Employee Cost' works out to ₹ 2388.10. The amount of other employee cost of ₹2388.10 crore is adopted as base for calculating allowable other employee cost for FY 2014-15.

3.10.7 The average annual WPI increase for FY 2014-15 is available for 8 months (April, 2014 to November, 2014), the Commission has calculated the average WPI increase of 3.20% which is adopted for purposes of calculation of allowable other employee cost for FY 2014-15. The allowable 'other employee cost' for FY 2014-15 is ₹2464.52 crore for PSPCL.

Thus, the Commission approves the total employee cost of ₹4346.47 (1881.95+2464.52) crore for PSPCL for FY 2014-15.

3.11 Repair & Maintenance (R&M) Expenses

3.11.1 In the ARR Petition for FY 2014-15, PSPCL projected R&M expenses at ₹442.65 crore against which the Commission approved ₹412.17 crore in the Tariff Order for FY 2014-15.

3.11.2 In the ARR Petition for FY 2015-16, PSPCL has revised its claim to ₹584.75 crore as normative R&M expenses for FY 2014-15 basing their claim on the normative R&M expenses for FY 2012-13. The claim also includes ₹17.87 crore of R&M expenses for asset addition during the year 2014-15.

3.11.3 As discussed in para 5.11.5 of Tariff Order of PSPCL for FY 2014-15, the Commission adopts R&M expenses of ₹354.94 crore as base expenses for calculating R&M expenses for FY 2013-14. There was WPI increase of 5.98% for FY 2013-14. After applying WPI increase of 5.98%, the R&M expenses work out to ₹376.17 crore.

3.11.4 According to Regulation 28 (6) of the PSERC Tariff Regulations, R&M expenses for fixed assets added during the year are to be considered on pro-rata basis from the date of commissioning. The Commission ascertained capitalization of Assets of ₹1928.97 crore for FY 2013-14 in para 5.11.6 of Tariff Order for FY 2014-15. Therefore, R&M expenses for these assets added during the year are being considered. The average percentage rate of R&M expenses of ₹376.17 crore for assets of ₹40431.14 crore as on 01.04.2013 work out to be 0.93% (376.17/40431.14x100). By applying the average rate of 0.93% on addition of assets of ₹1928.97 crore on an average basis, the allowable R&M expenses for the fixed assets added during the year work out to ₹17.94 crore. Thus, the base R&M expenses for FY 2014-15 are determined at ₹394.11 (376.17+17.94) crore.

3.11.5 The WPI increase for FY 2014-15 is available for only eight months from April, 2014 to November, 2014 which works out to 3.20%. Accordingly, the base R&M expenses of ₹394.11 crore are escalated @3.20% and work out to ₹406.72 crore.

3.11.6 R&M expenses for the assets added during FY 2014-15 are being considered assuming that these assets remained in service of the PSPCL for six months on an average during FY 2014-15. The average percentage rate of R&M expenses of ₹406.72 crore for assets of ₹42360.11 crore as on 01.04.2014 work out to be 0.96% (406.72/42360.11x100). PSPCL has proposed capital expenditure of ₹2505.06 crore against which ₹2662.16 crore has been proposed as Capitalization of Assets. However, based on the capital expenditure actually incurred up to November, 2014, the Commission decides to approve the investment outlay of ₹2000.00 crore for FY 2014-15 against which the Capitalization works out to ₹2174.20 crore. By applying the average rate of 0.96% on addition of assets of ₹2174.20 crore for six months on an average basis, the allowable R&M expenses for the fixed assets added during the year work out to ₹10.44 (2174.20x0.96%/2) crore. Thus, R&M expenses for FY 2014-15 are determined at ₹417.16 (406.72+10.44) crore.

The Commission approves R&M expenses of ₹417.16 crore for FY 2014-15 against the claim of ₹584.75 crore of PSPCL.

3.12 Administrative and General (A&G) Expenses

3.12.1 In the ARR Petition for FY 2014-15, PSPCL projected A&G expenses of ₹172.87 crore against which the Commission approved ₹135.73 crore. The approved A&G expenses included annual license fee of ₹5.08 crore and fee for determination of tariff of ₹5.74 crore.

3.12.2 In the Tariff Petition for FY 2015-16, PSPCL has revised its claim to ₹167.12 crore based on normative A&G expenses of FY 2013-14. The A&G expenses include the license fee and fee for determination of Tariff amounting to ₹11.31 crore. In reply to the deficiency letter, PSPCL vide memo no. 1229/CC/DTR/Dy.CAO/244/deficiencies dated 09.12.2014 has intimated that the A&G expenses for FY 2014-15 include an amount of ₹5.00 crore for donation for Cancer and De-addiction infrastructure. As Commission is allowing A&G expenses as per PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, so amount of ₹5.00 crore claimed by PSPCL as donation made to Cancer and Drug Addiction Treatment Infrastructure Fund should be met out of profit earned by PSPCL during FY 2014-15, if any, and not passed on to the consumers. Accordingly, this donation of ₹5.00 crore is not being allowed.

3.12.3 As discussed in para 5.12.6 of Tariff Order of PSPCL for FY 2014-15, the Commission adopts A&G expenses of ₹107.54 crore as base expenses for calculating A&G expenses for FY 2013-14. There was WPI increase of 5.98% for FY 2013-14. After applying WPI increase of 5.98%, the A&G expenses work out to ₹ 113.97 crore.

3.12.4 According to Regulation 28 (6) of the PSERC Tariff Regulations, A&G expenses for fixed assets added during the year are to be considered on pro-rata basis from the date of commissioning. The Commission ascertained capitalization of Assets of ₹1928.97 crore for FY 2013-14 in para 5.11.6 of Tariff Order for FY 2014-15. Therefore, A&G expenses for these assets added during the year are being considered. The average percentage rate of A&G expenses of ₹113.97 crore for assets of ₹40431.14 crore as on 01.04.2013 work out to be 0.28% (113.97/40431.14x100). By applying the average rate of 0.28% on addition of assets of ₹1928.97 crore on an average basis, the allowable A&G expenses for the fixed assets added during the year work out to ₹5.40 crore. Thus, the base A&G expenses for FY 2014-15 are determined at ₹119.37 (113.97+5.40) crore.

3.12.5 The WPI increase for FY 2014-15 is available for only eight months from April, 2014 to November, 2014 which works out to 3.20%. Accordingly, the base A&G expenses of ₹119.37 crore are escalated @3.20% and work out to ₹123.19 crore.

3.12.6 A&G expenses for the assets added during FY 2014-15 are being considered assuming that these assets remained in service of the PSPCL for six months on an average during FY 2014-15. The average percentage rate of A&G expenses of ₹123.19 crore for assets of ₹42360.11 crore as on 01.04.2014 work out to be

0.29% (123.19/42360.11x100). PSPCL has proposed capital expenditure of ₹2505.06 crore against which ₹2662.16 crore has been proposed as Capitalization of Assets. However, based on the capital expenditure actually incurred up to November, 2014, the Commission decides to approve the investment outlay of ₹2000.00 crore for FY 2014-15 against which the Capitalization works out to ₹2174.20 crore. By applying the average rate of 0.29% on addition of assets of ₹2174.20 crore for six months on an average basis, the allowable A&G expenses for the fixed assets added during the year work out to ₹3.15 (2174.20x0.29%/2) crore. Thus, A&G expenses for FY 2014-15 are determined at ₹126.34 (123.19+3.15) crore. Besides, PSPCL has claimed ₹11.31 crore as License and ARR fee for FY 2014-15 which is allowed by the Commission.

The Commission, thus, approves A&G expenses of ₹137.65 (126.34+11.31) crore for FY 2014-15 against the claim of ₹167.12 crore of PSPCL.

3.13 Depreciation Charges

3.13.1 In ARR Petition for FY 2014-15, PSPCL projected the depreciation charges of ₹863.36 crore for FY 2014-15 against which the Commission approved the depreciation charges of ₹764.42 crore.

3.13.2 In the ARR Petition of FY 2015-16, PSPCL has revised its claim of depreciation charges to ₹954.93 crore. PSPCL vide letter No.307/308 dated 28.01.2015 has again revised its claim of depreciation charges to ₹954.49 crore. PSPCL has calculated the depreciation on the average rate of depreciation which is applied across the asset classes on the opening balance of assets for the year.

3.13.3 The Commission approved the depreciation charges of ₹701.37 crore for FY 2013-14 in para 5.13.1 of Tariff Order FY 2014-15 on the Gross Fixed Assets value (GFA) of ₹21459.61 crore (excluding land and land rights) as on March 31, 2013. In the absence of Audited Annual Accounts for FY 2013-14 and sub-head wise detail of assets for FY 2013-14, the Commission adopts the addition of GFA of ₹1928.97 crore for FY 2013-14 as per para 5.11.6 of Tariff Order for FY 2014-15. There was opening balance of GFA as on 01.04.2013 of ₹21459.61 crore and as on 01.04.2014 of ₹23388.58 (21459.61+1928.97) crore. Accordingly, the Commission determines the depreciation charges as ₹764.42 crore for FY 2014-15.

3.13.4 PSPCL vide memo no. 11/A&R/A-44 dated 08.01.2015 intimated that the company has amended the accounting policy as under:

"The amount received till date or to be received in future on account of consumer's contributions, grants and subsidies towards cost of assets be treated as deferred income, accounted for as reserve, in the first instance and apportioned to P&L @ 5% of the balances outstanding under consumer's contribution, grants & subsidies towards cost of assets at the year end with effect from 01.04.2013."

The company also intimated that there were capital assets of ₹1113.19 crore created out of Consumer Contribution, Grants and Subsidies as on 31.03.14. Accordingly, the Commission reduces an amount of ₹55.66 crore i.e 5% of ₹1113.19 crore from ₹764.42 crore of depreciation charges allowable for FY 2014-15.

Thus, the Commission approves Depreciation Charges of ₹708.76 (764.42-55.66) crore for FY 2014-15.

3.14 Interest and Finance Charges

3.14.1 In the ARR Petition for FY 2014-15, PSPCL had claimed Interest and Finance charges of ₹2763.30 crore (net) against which the Commission had approved an amount of ₹2236.78 crore for FY 2014-15. In the ARR Petition for FY 2015-16, PSPCL has revised the Interest and Finance Charges for FY 2014-15 to ₹2471.57 crore inclusive of finance charges of ₹52.73 crore as given in Table 3.16.

Table 3.16: Interest and Finance Charges claimed by PSPCL for FY 2014-15 (RE)

(₹ crore)

Sr. No.	Description	Interest as depicted in ARR Petition
I	II	III
1.	Interest on Institutional Loans	1015.79
2.	Interest on GoP Loans	18.00
3.	Interest on GPF	169.00
4.	Interest to Consumers	160.00
5.	**Sub Total (1+2+3+4)**	**1362.79**
6.	Interest on Working Capital Loan (WCL)	1394.05
7.	Finance Charges	52.73
8.	**Total(5+6+7)**	2809.57
9.	Less Capitalization	338.00
10.	**Net Interest and Finance Charges**	**2471.57**

PSPCL has submitted that interest of ₹339.68 crore on re-called GoP loans of ₹3022.10 crore, interest on loan taken in lieu of adjustment of ₹981.93 crore and interest on adjustment of RBI bonds against subsidy of ₹63.73 crore may also be allowed. PSPCL has neither claimed their interest amount in above Table of

Interest & Finance Charges nor claimed in ARR for FY 2015-16. The Interest and Finance Charges allowable to PSPCL are discussed in the ensuing paragraphs.

3.14.2 **Investment Plan**

The Commission in its Tariff Order for FY 2014-15 approved an Investment Plan of ₹2000.00 crore against projected capital expenditure of ₹4107.62 crore for FY 2014-15. In the ARR Petition for FY 2015-16, PSPCL has submitted a revised Investment Plan of ₹2505.06 crore for FY 2014-15 as summarized in Table 3.17.

Table 3.17: Summary of Capital Expenditure planned by PSPCL

(₹ crore)

Sr. No.	Particulars	FY 2014-15 (RE)
I	II	III
(a)	Generation	450.26
(b)	Sub-Transmission & associated Projects	469.00
c)	Distribution	1565.00
(d)	Non-Plan Expenditure	20.80
	Total	**2505.06**

The Utility has submitted that capital expenditure is planned on Generation activities mainly for the R&M activities and on Transmission & Distribution activities for improvement projects for network up to 66 kV, construction of new sub stations and mini grid substations along with associated Transmission lines. The Commission has reviewed the capital expenditure planned by utility for FY 2014-15 for different functions of Generation, Transmission and Distribution.

(a) Generation

For FY 2014-15, PSPCL has proposed expenditure on major schemes namely R&M of Bhakra left bank and Dehar PH (₹57.00 crore), Mukerian HEP-II (₹37.83 crore), R&M of HEP`s of PSPCL (₹131.31 crore), R&M of other Hydel projects (₹33.49 crore), R&M of GNDTP (₹100.46 crore), GGSSTP (₹54.09 crore) and GHTP Stage-I & Stage II (₹32.58 crore).

(b) Transmission

PSPCL has also submitted that capital expenditure of ₹469.00 crore has been planned for network capacity addition, improvement projects for network up to 66 kV, construction of new substations and mini grid substations along with associated transmission lines during FY 2014-15.

(c) Distribution

PSPCL has further submitted that distribution function requires regular capital expenditure for network capacity addition and system improvement works. The improvement in net-work will lead to reduction of distribution losses in the net-work. The proposed expenditure is mainly envisaged for normal development works including System Improvement schemes (₹686.00 crore), works relating to APDRP-II part-A and B (₹500.00 crore), release of Tubewell connections (₹120.00 crore) and shifting of meters out of consumer premises (₹182.00 crore) and for other works (₹77.00 crore).

3.14.3 The Commission observes that the actual capital expenditure incurred by PSPCL during FY 2014-15 is ₹961.28 crore upto November, 2014 (as per capital statement ending November, 2014) and the investment proposed by PSPCL for FY 2014-15 at ₹2505.56 crore is on the higher side. The Commission has considered the claim for investment of the utility in view of the growing load demand, need of Transmission network expansion and improvement in Distribution system. Keeping in view the importance of the schemes under execution, the Commission approves the capital investment of ₹2000.00 crore for FY 2014-15 against ₹2505.56 crore proposed by the utility for FY 2014-15. However, increase/decrease if any, in actual capital investment will be considered during True up.

3.14.4 In addition, PSPCL has received consumer contribution of ₹227.87 crore upto December, 2014 as per PSPCL letter no. 607 dated 05.02.2015 and after increasing it proportionately, estimated receipts on this account become ₹303.83 crore. Accordingly, actual loan requirement for the level of investment works out to ₹1696.17 (2000.00-303.83) crore. This loan requirement of ₹1696.17 crore is taken into consideration for computation of Interest Charges.

3.14.5 PSPCL has proposed to capitalize assets to the extent of ₹2662.16 crore for FY 2014-15 against the proposed Investment Plan of ₹2505.06 crore. However, capitalization of assets is determined as ₹2174.20 crore in the ratio of opening capital works-in-progress (CWIP) and capital expenditure during the year to sum of CWIP and estimated capital expenditure of PSPCL as approved by the Commission.

3.14.6 In the ARR Petition for FY 2015-16, PSPCL has claimed interest charges of ₹1015.79 crore against opening balance of loans(other than working capital loans, GP Fund & RBI bonds/ GoP Loans) of ₹8017.70 crore for FY 2014-15.The Commission had approved the opening balance of loans as ₹7028.82 crore in Table 6.26 of the Tariff Order for FY 2014-15.The Commission, however, considers the actual loan requirement of ₹1696.17 crore against the proposal of PSPCL of ₹2184.00 crore (other than WCL, GP Fund, GoP loan and R-APDRP-A loan) for determination of tariff. Considering the opening balance of ₹7028.82 crore for FY 2014-15, the interest on loans (other than WCL, GP Fund and GoP Loans) works out to ₹869.34 crore as shown in Table 3.18.

Table 3.18: Interest on Loans (other than working capital loans for FY 2014-15)

(₹ 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)	8017.70	2184.00	1117.52	9084.18	1015.79
2.	Approved by the Commission (other than WCL)	7028.82	1696.17	1117.52	7607.47	869.34

3.14.7 **Interest on GoP Loans**

In the ARR Petition of 2015-16, PSPCL has claimed ₹18.00 crore as interest on account of GoP loans. On a query from the Commission, PSPCL informed vide memo no. 2928/CC/DTR/Dy.CAO/241/Deficiency Dated 10.12.2013 and memo no. 225/DTR/Dy.CAO/241/Vol-II dated 30.01.2014 that the Interest of ₹18.00 crore relates to RBI bonds charged by Government as interest and adjusted against subsidy. Thus, there are no GoP loans and consequently no interest liability on account of GoP loans. **Accordingly, claim of interest of ₹18.00 crore is not allowed.**

3.14.8 **Interest on General Provident Fund (GPF)**

In the ARR Petition for FY 2015-16, PSPCL has claimed interest of ₹169.00 crore on GPF accumulations for FY 2014-15.**The interest of ₹169.00 crore on GPF, being a statutory payment is allowed as claimed by PSPCL.**

3.14.9 **Finance Charges**

PSPCL in its ARR Petition for FY 2015-16 has claimed finance charge of ₹52.73 crore for FY 2014-15. These finance charges of ₹52.73 crore work out to be 2.41% of the loan amount of ₹2184.00 crore claimed by PSPCL. Regulation 26 (6) of PSERC Tariff Regulations provides for allowing finance charges (including guarantee fee payable to GoP) on loans other than Working Capital Loans. The Commission has approved loan requirement of ₹1696.17 crore for FY 2014-15.

Accordingly, Commission approves the finance charges of ₹40.88 crore @2.41% of the loan requirement of ₹1696.17 crore for FY 2014-15.

3.14.10 **Interest on Consumer Security Deposit**

PSPCL has claimed ₹160.00 crore towards interest to consumers in the ARR for FY 2015-16. As per PSERC (Electricity Supply Code and Related Matters) Regulations, 2007, interest is payable to consumers on the security deposits. PSPCL vide letter no. 402/DTR/Dy.CAO/241/Vol-III dated 03.03.2014 has intimated the security deposits ending 31.03.2014 as ₹2292.00 crore. The Commission has determined an amount of ₹275.04 crore as interest payable to the consumers on security deposits during FY 2014-15. Accordingly, **the Commission allows interest of ₹275.04 crore on Consumer Security Deposits for FY 2014-15 subject to true-up.**

3.14.11 **Capitalization of Interest Charges**

PSPCL has claimed ₹338.00 crore towards capitalization of interest charges. The Commission has determined the capitalization of interest charges of ₹27.96 crore in the ratio of closing works in progress to the total capital expenditure. **The Commission, accordingly, approves capitalization of interest charges of ₹27.96 crore for FY 2014-15.**

3.14.12 **Interest on Working Capital**

In the Tariff Order for FY 2014-15, the Commission approved working capital of ₹3109.09 crore with interest cost of ₹349.46 crore. In the ARR Petition of FY 2015-16, PSPCL has submitted total working capital requirement of ₹11660.19 crore (opening balance) with an interest liability of ₹1394.05 crore.

The Commission has determined the working capital requirement of ₹3344.76 crore as per PSERC Tariff Regulations. As per Regulations, the rate of interest on working capital shall be equal to the actual rate of interest paid/ payable on loans by the licensee(s) or the State Bank of India Advance Rate (SBAR) as on 1st April of the relevant year, whichever is lower. The rate of 11.71%, being the weighted average rate of interest, has been used for calculation of interest on working capital loan. The detail of working capital requirement as per Regulation 30 and allowable interest thereon is depicted in Table 3.19.

Table 3.19: Interest on Working Capital Requirement for FY 2014-15

(₹ crore)

Sr. No.	Particulars	Amount
I	II	III
1.	Fuel Cost for two months	585.53
2.	O & M expenses for one month	408.44
3.	Receivables for two months	3935.88
4.	Maintenance Spares@15% of O&M expenses	735.19
5.	Less Consumer security deposit	2320.28
6.	**Total Working Capital Required**	**3344.76**
7.	Interest rate (calculated on weighted average)	11.71%
8.	**Interest on Working Capital Loan**	**391.67**

The Commission, accordingly, approves revised interest of ₹391.67 crore on working capital requirements of ₹3344.76 crore for FY 2014-15.

In view of above, the interest and finance charges are approved as detailed in Table 3.20.

Table 3.20: Interest and Finance Charges for FY 2014-15

(₹ crore)

Sr. No.	Particulars	Loans as on April 1, 2014	Receipt of loans	Repayment of loans	Loans as on March 31,2015	Interest approved by Commission
I	II	III	IV	V	VI	VII
1.	Approved by the Commission (other than WCL)	7028.82	1696.17	1117.52	7607.47	869.34
2.	Interest on GPF					169.00
3.	**Total (1+2)**	7028.82	1696.17	1117.52	7607.47	1038.34
4.	Finance Charges					40.88
5.	Interest on Consumer Security Deposits					275.04
6.	**Gross Interest and Finance Charges (3+4+5)**					**1354.26**
7.	Less: Capitalization					27.96
8.	**Net interest and Finance Charges (6-7)**					**1326.30**
9.	Add: Interest on Working Capital					391.67
10.	**Total (8+9)**					**1717.97**

The Commission, accordingly, approves the interest and finance charges of ₹1717.97 crore for PSPCL for FY 2014-15.

3.15 Return on Equity

3.15.1 In the ARR Petition for FY 2014-15, PSPCL claimed RoE of ₹942.62 crore for FY 2014-15 on equity base of ₹6081.43 crore against which the Commission approved RoE of ₹942.62 crore to PSPCL.

3.15.2 In the ARR Petition for FY 2015-16, PSPCL has claimed ₹942.62 crore as RoE on Government equity holding of ₹6081.43 crore.

3.15.3 Erstwhile Punjab State Electricity Board (PSEB) was unbundled vide the Government of Punjab, Notification dated 16.04.2010 in terms of Section 131 of the Electricity Act, 2003 and the provisional transfer scheme for transfer of assets and liabilities etc. to Punjab State Power Corporation Limited (PSPCL) and Punjab State Transmission Corporation Limited (PSTCL) was issued. Since the transfer scheme dated 16.04.2010 was only provisional and the final transfer scheme was yet to be issued by the Government of Punjab, which was to take some time on account of detailed verification of assets etc., this Commission for the purpose of tariff determination continued the tariff determination based upon the capital structure / equity in the hands of PSEB, which was ₹2946.11 crore, out of which equity of PSPCL was ₹2617.61 crore. Subsequently, the Government of Punjab issued the final transfer scheme vide Notification dated 24.12.2012 allocating the opening balances of various assets and liabilities between the two Successor Entities of erstwhile PSEB viz. PSPCL and PSTCL as on 16.04.2010. In the State Government's Notification dated 24.12.2012 amending the Transfer Scheme of 2010, the equity was determined as ₹6687.26 crore in place of ₹2946.11 crore, assigning ₹6081.43 crore to PSPCL and ₹605.08 crore to PSTCL. The Commission accordingly approved the Return on Equity of ₹942.62 crore on the equity amount of ₹6081.43 crore vested with PSPCL in the Review for FY 2012-13 in the Tariff Order of PSPCL for FY 2013-14. The Commission, similarly allowed RoE amounting to ₹942.62 crore on an equity of ₹6081.43 crore for FY 2013-14 in Tariff Order for PSPCL for FY 2013-14. The same amount of RoE was allowed for FYs 2010-11 & 2011-12 (True-ups) and for FY 2014-15 in Tariff Order dated 22.08.2014 of PSPCL for FY 2014-15.

Tariff Order of PSPCL for FY 2013-14 was challenged before the Hon'ble APTEL in Appeal No.142 of 2013 and Appeal No.168 of 2013 by some consumers of PSPCL and RoE approved for FY 2012-13 and allowed for FY 2013-14 was one of the issues raised by the Appellants on the ground that equity has been enhanced to ₹6687.26 crore by unjustifiably treating / including Consumer Contributions amounting to ₹2599.32 crore and Subsidies / Grants for capital assets amounting to ₹1142.02 crore in the equity against the law and the regulations. Hon'ble APTEL decided the issue vide Judgment dated 17.12.2014 and held as under:

"The findings of this Tribunal in Appeal No.46 of 2014 shall squarely apply in this case. Accordingly, this issue is decided in favour of the appellants. The State Commission shall re-determine the RoE as per our directions and excess amount allowed to the distribution licensee with carrying cost shall be adjusted in the next ARR of the respondent No.2."

PSPCL, the respondent No.2, filed Appeal under Section 125 of the Electricity Act, 2003 before the Hon'ble Supreme Court against the Judgment dated 17.12.2014 of Hon'ble APTEL in Appeal Nos. 142 and 168 both of 2013. Hon'ble Supreme Court vide its Order dated 27.03.2015 has stayed the Judgment dated 17.12.2014. Accordingly, the directions of Hon'ble APTEL in its Judgment dated 17.12.2014 cannot be complied with till order remains stayed or the Appeal is finally disposed of by Hon'ble Supreme Court.

In view of above, RoE to PSPCL is being allowed on the equity amount of ₹6081.43 crore @15.50% per annum.

3.15.4 In accordance with the PSERC Tariff Regulations, the Commission decides that the Return on Equity @15.5% per annum be allowed on the equity of ₹6081.43 crore for FY 2014-15.

The Commission, thus, approves RoE of ₹942.62 crore to PSPCL for FY 2014-15, subject to outcome of Appeal pending in Hon'ble Supreme Court of India.

3.16 Transmission charges payable to PSTCL

The Commission, in its Tariff Order for FY 2014-15 passed on the ARR of PSTCL for FY 2014-15 had determined ₹895.66 crore as the Transmission & SLDC charges payable to PSTCL by PSPCL. Accordingly, the amount of ₹895.66 crore is being included in the ARR of PSPCL for FY 2014-15.

3.17 Royalty Charges Payable to Govt. of Punjab on Power from RSD

In the ARR for FY 2014-15, PSPCL had projected Royalty charges at ₹14.13 crore which were approved by the Commission. Now in the ARR for FY 2015-16, PSPCL has revised the charges for FY 2014-15 to ₹20.00 crore. **Accordingly, ₹20.00 crore are approved as Royalty charges by the Commission.**

3.18 Demand Side Management (DSM) Fund

In the Tariff Order for FY 2014-15, the Commission provisionally approved an amount of ₹40.76 crore as claimed by PSPCL for implementation of various DSM programmes in accordance with the provisions of DSM regulations during FY 2014-15. PSPCL was directed to keep this amount in a separate DSM fund and use exclusively for achieving objectives of DSM regulations. The Commission also directed PSPCL to achieve energy saving of 500 MU (including backlog of 2013-14) during FY 2014-15. However, PSPCL has failed to create a separate DSM fund for which ₹40.76 crore was approved by the Commission in the Tariff Order for FY 2014-15.

In the ARR Petition, PSPCL has expressed its inability to implement the Demand Side Management measures which require help of technical experts in the field and participation of consumers. It was precisely for this reason that the Commission directed PSPCL in the Tariff Order for FY 2013-14 to get load/market research carried out from an expert agency and prepare a comprehensive DSM plan in accordance with DSM Regulations. PSPCL has now informed that MOU with Bureau of Energy Efficiency (BEE) has been signed under Capacity Building Programme of Ministry of Power, Govt. of India. Under this programme, Energy Efficiency Services Ltd.(EESL) will prepare DSM plan on the basis of load research and analysis for which The Energy and Resources Institute (TERI) has been empanelled by EESL. PSPCL has claimed a revised amount of ₹5.00 crore for creation of DSM fund for FY 2014-15. **The Commission, thus, approves ₹5.00 crore for creation of DSM fund.**

3.19 Prior Period Expenses

PSPCL in the ARR has projected previous payments of ₹279.31 crore made during first half of FY 2014-15 under the head 'Power Purchase Cost' as brought out in para 3.9. PSPCL was asked vide Commission's letter no. 14563 dated 08.01.2015 to intimate the details of prior period expenses of ₹279.31 crore made during FY 2014-15. PSPCL in its reply vide letter no. 119 dated 28.01.2015 submitted the details of prior period expenses and further submitted that these prior period expenses relate to NTPC, NHPC, SJVNL and THDCIL central sector generating stations. **The Commission provisionally approves the prior period expenses of ₹279.31 crore made by PSPCL during FY 2014-15. PSPCL is directed to submit audited details of these prior period expenses at the time of True up of FY 2014-15.**

3.20 Non-Tariff Income

3.20.1 In the ARR Petition for FY 2014-15, PSPCL projected Non-Tariff Income of ₹818.56 crore for FY 2014-15 against which the Commission approved the Non-

Tariff Income of ₹589.79 crore for PSPCL for FY 2014-15.

3.20.2 In ARR Petition for FY 2015-16, PSPCL has revised Non-Tariff Income to ₹964.91 crore for FY 2014-15. PSPCL has submitted that considering the late payment surcharge as Non-Tariff/Other Income adversely affects the cash flow position of PSPCL. PSPCL has, therefore, requested that late payment surcharge may not be considered for determining the revenue gap for each of the years. The Commission observes that receipts on account of Late Payment Surcharge are to be treated as Non-Tariff Income as per Regulation 34 of PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. Moreover, interest on working capital is allowed to the utility on normative basis notwithstanding that the licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on normative basis. So the plea of the utility not to treat the late payment surcharge as part of the Non-Tariff Income finds no merit. As such, the plea of PSPCL to exclude late payment surcharge from Non-Tariff Income is not tenable.

The late payment surcharge of ₹109.81 crore is submitted by PSPCL in ARR petition FY 2015-16 which is included in the Non Tariff Income.

PSPCL vide memo no. 395/CC/DTR/Dy.CAO/244 Vol-I dated 24.03.2005 has revised the Wheeling and Cross subsidy charges from ₹342.51 crore to ₹125.00 crore. Accordingly, ₹217.51 (342.51-125.00) crore has been reduced from Non tariff Income on account of Wheeling and Cross subsidy surcharge.

Besides, meter rentals etc. of ₹31.00 crore of subsidized categories as projected by PSPCL in the ARR are also required to be added to the Non Tariff Income.

Thus, the Commission approves Non-Tariff Income of ₹888.21 (964.91+109.81-217.51+31.00) crore for FY 2014-15.

3.21 Revenue From Sale of Power

3.21.1 In the ARR for FY 2014-15, PSPCL projected revenue from existing tariff at ₹22755.39 crore against which the Commission approved ₹22043.76 crore as revenue from existing tariff for FY 2014-15. In the ARR for FY 2015-16, PSPCL has revised revenue from existing tariff to ₹23234.80 crore. However, based on the energy sale of different categories, the Commission approves the revenue from sale of power as ₹23615.28 crore for energy sales of 40470 MU for FY 2014-15 as shown in Table 3.21.

Table 3.21: Revenue from Sale of Power for FY 2014-15

Sr. No.	Description	As per RE of PSPCL		As determined by the Commission		
		Energy Sales (MU)	**Revenue (₹crore)**	**Energy Sales (MU)**	**Average billing rate (paise/unit)**	**Revenue (₹crore)**
I	**II**	**III**	**IV**	**V**	**VI**	**VII**
1.	Domestic					
a)	0-100 units			6416	4.56	2925.70
b)	101-300 units			3351	6.14	2057.51
c)	Above 300 units			1723	6.56	1130.29
	Sub-total	**11490**	**6221.41**	**11490**		**6113.50**
2.	Non-Residential Supply					
	Upto 100 Units			1164	657	764.75
	Above 100 Units			2081	671	1396.35
	Sub-Total	**3245**	**2166.32**	**3245**		**2161.10**
3.	Public Lighting	187	125.02	185	669	123.77
4.	Industrial Consumers					
a)	Small Power	924	540.25	925	585	541.13
b)	Medium Supply	1942	1239.50	1942	638	1239.00
c)	Large Supply	11252	7272.24	11252	646	7268.79
5.	Bulk Supply & Grid Supply					
a)	HT			597	641	382.68
b)	LT			37	668	24.72
	Sub-total	**634**	**407.01**	**634**		**407.40**
6.	Railway Traction	153	102.52	151	671	101.32
7.	Common Pool	309	144.30	309		144.30
8.	Outside State	73	7.63	73		7.58
9.	AP	10832	4939.54	10264	456	4680.38
10.	Add: PLEC & MMC		745.00			745.00
11.	**Total**	**41041**	**23910.74**	**40470**		**23533.27**
	Add:- Revenue recoverable on a/c of FCA for 1st Quarter of FY 2014-15 levied by PSPCL w.e.f 01.10.2014 to 31.12.2014					5.60
	Add:- Revenue recoverable on a/c of FCA for 2nd Quarter of FY 2014-15 levied by PSPCL w.e.f 01.01.2015 to 31.03.2015					76.41
	Grand Total					**23615.28**

3.22 Rebate to consumers catered at higher voltages, Financial Impact of ToD Tariff, Financial Impact of rebate due to increased metered sales and Financial Impact of rebate of 7.5% in view of APTEL Judgement.

3.22.1 Rebate to consumers catered at higher voltages

The Commission in the Tariff Order for FY 2014-15 approved rebate of 30 paise/kVAh to consumers catered at 400/220/132 kV voltage, 25 paise/kVAh at 66/33 kV, 20 paise/kVAh to DS, NRS and MS category consumers catered at 11 kV and 20 paise/kWh to AP/AP High Tech, Compost Plants/Solid Waste Management Plants for Municipalities/Urban Local Bodies catered at 11 kV, and assessed the impact of high voltage rebate at ₹143.75 crore on the basis of energy sales data supplied by PSPCL. The revenue from tariff on existing rates was accordingly reduced to this extent.

PSPCL in the ARR for FY 2015-16 has projected the impact of high voltage rebate at ₹143.75 crore during FY 2014-15. **However, the Commission has assessed this impact at ₹145.28 crore, on the basis of energy sales data supplied by PSPCL for FY 2014-15 in the ARR for FY 2015-16 and approves the same provisionally.** The revenue from tariff on existing rates has accordingly been reduced to this extent. The actual impact on revenue will be adjusted at the time of true up. **PSPCL is directed to submit complete details of category-wise energy sales and high voltage rebate allowed, at the time of true up of FY 2014-15.**

3.22.2 **Financial impact of ToD tariff**

PSPCL in the ARR for FY 2015-16 has projected revenue loss of ₹132.00 crore due to extension of ToD rebate by 2 months (April and May, 2014), increase in ToD rebate from ₹1 per kVAh to ₹1.50 per kVAh and extension of ToD tariff to MS category of consumers during FY 2014-15. Further, PSPCL has projected revenue loss on account of ToD rebate for adjusting peak load exemption charges (PLEC) as ₹129.00 crore during FY 2014-15. During final presentation by PSPCL on 19.02.2015, the figure of ₹132.00 crore was revised to ₹128.80 crore as per details given below:

Sr. No.	Description	Amount (₹ crore)	
		Details as per ARR petition	Details on the basis of actual data
1	Extension in ToD period by 2 months	42.00	57.66
2	Increase in rebate from ₹1 to ₹1.50 per kVAh	64.50	71.04
3	Extension of ToD to MS category	25.50	0.10
	Total	**132.00**	**128.80**

With regard to impact of ToD rebate for adjusting PLEC, it was submitted by PSPCL in the presentation that the impact of ₹129.00 crore has already been assessed and approved by the Hon'ble Commission as per para 6.21 of the Tariff Order for FY 2014-15. It was further submitted that since the entire sale including any increase in sale has been taken in sales for assessment of revenue and total PLEC collected at the increased rate has been taken for revenue assessment, the loss of ₹129.00 crore as a result of ToD rebate has been taken from the revenue assessed at normal tariff rates. PSPCL further submitted that based on the actual data available, the impact of ToD rebate @ ₹1/kVAh has been assessed at ₹142.00 crore. In the presentation, it was submitted that the income from PLEC for FY 2014-15 has been taken as ₹354.05 crore, which includes the income from

PLEC charges based on ₹3/kVAh during peak load hours from 06.00 PM to 10.00 PM for LS industrial category consumers with effect from 01.10.2014 as decided by the Commission in the Tariff Order for FY 2014-15.

The Commission has assessed the revenue loss of ₹270.80 crore on the basis of energy sales data supplied by PSPCL and approves the same provisionally. The revenue from tariff on existing rates has accordingly been reduced to this extent. The actual impact on revenue will be adjusted at the time of true up. **PSPCL is directed to submit complete details of financial impact of ToD rebate and ToD surcharge and income from PLEC at the time of true up of FY 2014-15.**

3.22.3 **Financial impact of rebate due to increased metered sales**

The Commission approved rebate of ₹1/kWh (or kVAh) on the category-wise tariff for all categories, except street lighting and AP categories, for any consumption during FY 2014-15 exceeding the consumption worked out as detailed in the Tariff Order for FY 2014-15. It was observed by the Commission that this rebate will induce the consumers to consume more power which will result in reducing extra fixed cost of surrendered power to some extent, the actual quantum of the same and savings will only be known at the end of FY 2014-15 and shall be considered by the Commission at the time of true up.

PSPCL in the ARR for FY 2015-16 has projected revenue loss of ₹271.13 crore as a result of grant of rebate of ₹1/kWh (or kVAh) on the category-wise tariff, for consuming more power than a threshold limit. PSPCL was asked vide letter no.13250 dated 01.12.2014 to supply the detailed calculations. PSPCL vide its letter no. 1229 dated 09.12.2014 submitted the details, from which the Commission observed that the amount of financial implication has been worked out by PSPCL by applying the rebate to the whole quantum of increase in sales. It was pointed out to PSPCL vide Commission's letter no. 20114 dated 27.01.2015 that the major increase in sales may be due to release of new connections and increase in load/demand by the existing consumers. As such, PSPCL was advised to rework the figure of financial implication as a result of grant of rebate and submit the same to the Commission along with detailed calculations. PSPCL in its final presentation on 19.02.2015 stuck to the figure submitted in the ARR. **The Commission provisionally approves ₹271.13 crore on account of revenue loss as a result of grant of rebate of ₹1 per kWh (or kVAh) on the category-wise tariff for consuming more power than a threshold limit, as**

projected by PSPCL in the ARR. The revenue from tariff on existing rates has accordingly been reduced to this extent. The actual impact on revenue will be adjusted at the time of true up. **PSPCL is directed to submit complete details of financial impact of the rebate at the time of true up of FY 2014-15.**

3.22.4 **Financial Impact of rebate of 7.5% in view of APTEL Judgement**

In view of APTEL order dated 07.03.2014, the Commission in para 6.22 of the Tariff Order for FY 2014-15 allowed ₹22.52 crore as financial impact of rebate of 7.5% as under:

"The Hon'ble APTEL vide its common order dated 07.03.2014 has dismissed the Appeal nos. 202, 203 and 263 of 2012 filed by PSPCL before the Hon'ble APTEL challenging the Orders of PSERC dated 01.08.2012 in petition no. 37 of 2012 filed by BSNL, 06.08.2012 in petition no. 29 of 2012 filed by RIMT Institutions and 10.10.2012 in petition no. 41 of 2012 filed by Jaswinder Pal Singh, Ludhiana, respectively. In the impugned orders, the State Commission has held that the respondent consumers are entitled to rebate at 7.5% for taking supply of electricity at 11 kV, upto the period 31.03.2010. PSPCL vide its letter no. 5534 dated 24.04.2014 has intimated the financial impact of the implementation of the order of the APTEL dated 07.03.2014 as ₹22.52 crore.

As such, the Commission allows ₹22.52 crore provisionally for making refund to the consumers in view of APTEL Order dated 07.03.2014, during FY 2014-15.

3.23 Disallowances due to non-achievement of mile-stones

3.23.1 **Non-implementation of DSM Regulations and shifting of Meters**

The Commission in the Tariff Order for FY 2014-15 directed PSPCL to achieve energy saving of 500 MU (including back log of FY 2013-14) during FY 2014-15. PSPCL was asked to submit the quantum of energy saving achieved during 2014-15 through implementation of Demand Side Management measures in accordance with Demand Side Management Regulations. PSPCL in its reply claimed an energy saving of 101 MU through implementation of Bachat Lamp Yojna, use of 4 star rating AP motors by new consumers, ban on use of incandescent lamps in Govt. buildings and replacement of old inefficient air conditioners at GGSSTP Ropar. PSPCL has also claimed an energy saving of 1040 MU on account of shifting of meters outside the consumers' premises which has resulted in drastic reduction in pumped energy & increase in billed energy on these feeders. PSPCL has also claimed reduction in loading of these feeders thus saving additional expenditure on augmentation of system. The claim of energy saving to the tune of 1040 MU is totally hypothetical & unsubstantiated and cannot be relied upon without any independent evaluation of the project.

According to Demand Side Management Regulations, PSPCL is required to get the energy saving projects sanctioned from the Commission and get its benefits verified from an independent agency by way of monitoring and verification procedure prescribed in the Regulation. During FY 2014-15, no Demand Side Management project has been got sanctioned by PSPCL from the Commission and only in-principle approval of the pilot project for replacement of ICLs with LEDs under DELP scheme has been accorded by the Commission.

Thus PSPCL has again failed to comply with the directions of the Commission issued in the Tariff Order for FY 2014-15 regarding Demand Side Management and to achieve energy saving target of 500 MU fixed by the Commission for FY 2014-15. However, PSPCL has reported signing of MOU with Bureau of Energy Efficiency (BEE), Govt. of India for preparation and implementation of DSM plan under Capacity Building Programme of Ministry of Power, Govt. of India. For carrying out load research, M/s The Energy & Resource Institute (TERI) has been engaged and survey of various categories of consumers to identify the saving potential has already been taken in hand. The Commission in its Order dated 28.07.2014 in Petition No.15 of 2014 has also directed PSPCL to get third party audit conducted to verify/quantify the benefits that may have accrued with the shifting of meters & submit the report to the Commission. **The Commission will examine the impact of all these measures in detail after getting the reports and take appropriate decision on non-implementation of DSM Regulations by PSPCL during true-up of FY 2014-15.**

3.23.2 Employees Cost

In the Tariff Order for FY 2014-15, the Commission while expressing serious concern at the non-implementation of various directives by PSPCL for decreasing the employees cost and increasing employees' productivity, directed PSPCL to implement PwC report, restructure distribution set-up on functional basis and introduce automation for optimizing manpower output and efficiency. A disallowance of ₹20 crore was also made on this account for FY 2013-14 with the direction that it will continue annually on renewal basis till PSPCL implements all these steps to modernize its functioning.

On implementation of PwC report, PSPCL re-iterated that the report is still under consideration of the Board of Directors of PSPCL. The PwC report on manpower planning was submitted to PSPCL in March, 2011 and since its submission the reply of PSPCL in all subsequent ARR petitions has been that report is under the consideration of Board of Directors. In the tariff Order for FY 2014-15, the Commission directed PSPCL to submit the action taken report on PwC report within 3 months of issue of Tariff Order but no action has been taken by the licensee.

Regarding re-organization of distribution set-up on functional basis, PSPCL had been claiming positive results till August, 2013 due to its implementation but discontinued its further roll out in the State with the plea that the model is being re-examined. However, despite lapse of more than 18 months, no decision on further roll out of the re-organization has been taken by PSPCL. The Commission in its Order dated 28.11.2014 in Petition No.4 of 2014 clearly stated that PSPCL has to take prompt action in this matter as the decision cannot be allowed to linger on and in the process stall the reform process indefinitely. The Commission in the aforesaid Order directed PSPCL to furnish its final plan for re-organization of distribution set-up alongwith half yearly target by 31.01.2015 but PSPCL has failed to comply with the directions of the Commission. **Thus, as per decision of the Commission in Tariff Order for FY 2014-15 read with Order dated 28.11.2014 in Petition No.4 of 2014, a disallowance of ₹20 crore is made on this account during FY 2014-15 which shall continue in future also till the PSPCL implements the directives of the Commission.**

3.23.3 **Non achievement of 100% metering**

The Commission through its various Tariff Orders has been issuing directions to PSPCL to achieve 100% metering as envisaged in section 55 of the Electricity Act, 2003. In the Tariff Order for FY 2014-15, PSPCL was directed to submit its plan to achieve 100% metering within three months of the issuance of the Tariff Order. PSPCL has failed to submit any plan to implement the provisions of the Act. This shows total defiance of the licensee to implement the mandate of the Act. In the Tariff Order for FY 2014-15, while making a disallowance of ₹5.00 crore on this account, PSPCL was cautioned that it shall continue till PSPCL achieve 100% metering as per section 55 of the Act. **Since PSPCL has failed to take any tangible step to achieve 100% metering, the Commission thus decides to make disallowance of ₹5.00 crore on this account during FY 2014-15.**

3.24 Revenue Requirement for FY 2014-15

A summary of the Aggregate Revenue Requirement of PSPCL for FY 2014-15 as discussed in the preceding paragraphs is given in the Table 3.22.

Table 3.22: Revenue Requirement for FY 2014-15

(₹ crore)

Sr. No.	Items of Expenses	Projected by PSPCL in the ARR for FY 2014-15	Approved by the Commission in T.O. FY 2014-15	Revised by PSPCL in ARR FY 2015-16	Approved by the Commission in T.O. FY 2015-16
I	II	III	IV	V	VII
1.	Cost of fuel	4997.60	4795.12	4404.51	3513.20
2.	Cost of power purchase	9247.95	8381.06	10379.52	10603.65
3.	Employee cost excluding progressive funding of terminal benefits	4436.89	4286.13	4423.44	4346.47
	Progressive funding of terminal benefits	914.00	0.00	—	—
4.	R&M expenses	442.65	412.17	584.75	417.16
5.	A&G expenses	172.87	135.73	167.72	137.65
6.	Depreciation	863.36	764.42	954.93	708.76
7.	Interest charges	2763.30	2236.78	2471.57	1717.97
8.	Return on Equity	942.62	942.62	942.62	942.62
9.	Transmission Charges Payable to PSTCL	1333.12	895.66	895.66	895.66
10.	Charges payable to GoP on power from RSD	14.13	14.13	20.00	20.00
11.	Provision for DSM fund	40.76	40.76	5.00	5.00
12.	Prior period expenses				279.31
13.	**Total Revenue Requirement**	**26169.25**	**22904.58**	**25249.42**	**23587.45**
14.	Less: Non-Tariff income	818.56	589.79	964.91	888.21
15.	**Net Revenue Requirement**	**25350.69**	**22314.79**	24284.50	**22699.24**
16.	Revenue from existing tariff	22755.39	22043.76	22558.97	23615.28
17.	Less: Impact of:				
	i. Rebate to consumer catered at higher voltage		143.75	143.75	145.28
	ii. ToD tariff		42.00	132.00	270.80
	iii. ToD rebate for adjusting PLEC			129.00	
	iv. Rebate due to increased metered sale			271.13	271.13
	v. Rebate of 7.5% in view of APTEL Judgment		22.52		22.52
18.	**Net Revenue from Existing Tariff**	**22755.39**	**21835.49**	**23234.85**	**22905.55**
19.	Less: Disallowances due to non-achievement of mile-stone				25.00
20.	Total Gap(+) / Surplus(-) for FY 2014-15	(+) 2595.30	(+) 479.30	(+) 1049.66	(-)231.31
21.	Gap(+) /Surplus(-) up to FY 2013-14 (as per Table 5.23 of Tariff Order FY 2014-15)	(+) 12082.38	(+)177.71	(+) 4947.08	(+)177.71
22.	Carrying Cost on previous year Gap (Charged(+)/Recovery(-))	(+) 872.95	(-) 63.38	(+) 807.11	—
23.	**Net Gap(+)/Surplus (-) up to FY 2014-15**	**(+) 15550.64**	**(+) 593.63**	**(+) 6803.85**	**(-)53.60**

The surplus of ₹53.60 crore for FY 2014-15 (RE) and determined above has been carried over to Table 4.30.

Chapter 4
Annual Revenue Requirement for FY 2015-16

4.1 Energy Demand (Sales)

4.1.1 Metered Energy Sales

PSPCL has projected the metered energy sales for FY 2015-16 based on category-wise 3 years Compounded Annual Growth Rate (CAGR) from FY 2010-11 to FY 2013-14. The category-wise 3 year CAGR has been applied on the revised estimates of metered energy sales of respective categories for FY 2014-15, to arrive at the category-wise metered energy sales projections for FY 2015-16. The details of PSPCL's actual metered energy sales for FY 2013-14, revised estimates of metered energy sales for FY 2014-15 (RE) and projections for FY 2015-16 are given in Table 4.1.

Table 4.1: Energy Sales of Metered Categories for FY 2013-14 (actual), FY 2014-15 (RE) and FY 2015-16 (Projections) as per ARR Petition for FY 2015-16

Metered Energy Sales						
Sr. No.	**Category**	**FY 2013-14 (Actual) (MU)**	**FY 2014-15 (RE) (MU)**	**FY 2015-16 (Proj.) (MU)**	**YoY Growth (FY 2014-15)**	**YoY Growth (FY 2015-16)**
1	Domestic	10559.20	11489.48	12515.67	8.81%	8.93%
2	Commercial	3016.41	3245.58	3468.21	7.60%	6.86%
3	Industrial Supply					
a	*Small Power*	906.53	923.50	947.27	1.87%	2.57%
b	*Medium Supply*	1907.95	1942.65	1991.86	1.82%	2.53%
c	*Large Supply*	9807.05	11251.83	11783.76	14.73%	4.73%
4	Public Lighting	170.21	186.88	203.41	9.79%	8.84%
5	Bulk Supply	603.95	633.35	663.63	4.87%	4.78%
6	Railway Traction	143.45	152.75	152.56	6.48%	-0.13%
7	**Total Metered Sales**	**27114.75**	**29826.01**	**31726.36**	**10.00%**	**6.27%**

The 3 year CAGR as submitted by PSPCL in the ARR for FY 2015-16 and as calculated by the Commission are given in Table 4.1 (A).

Table 4.1 (A): 3 Year CAGR (with actual sales figures) & Estimated Energy Sales within the State for FY 2015-16

Sr. No.	Category	Energy Sales during FY 2010-11 (Actual) (MU)	Energy Sales during FY 2013-14 (actual but unaudited) (MU)	3 year CAGR submitted by PSPCL (FY 2010-11 to FY 2013-14 (with actual sales figures))	3 year CAGR calculated by the Commission (FY 2010-11 to FY 2013-14 (actual))	Energy Sales now approved for FY 2014-15 (MU)	Estimated Energy Sales for FY 2015-16 after applying CAGR of Col. VI (MU)
I	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**
1.	Domestic	8169	10559.20	8.93%	8.93%	11490	12516
2.	Non-Residential	2472	3016.41	6.86%	6.86%	3245	3467
3.	Small Power	840	906.53	2.57%	2.57%	925	949
4.	Medium Supply	1770	1907.95	2.53%	2.53%	1942	1991
5.	Large Supply	8538	9807.05	4.73%	4.73%	11252	11784
6.	Public Lighting	132	170.21	8.84%	8.84%	185	201
7.	Bulk Supply	525	603.95	4.78%	4.78%	634	664
8.	Railway Traction	144	143.45	-0.13%	-0.13%	151	151
9.	**Total metered sales (within the State)**	**22590**	**27114.75**			**29824**	**31723**

PSPCL submitted in the ARR for FY 2014-15 that with the commissioning of upcoming power stations such as Talwandi Sabo TPS, Rajpura TPS, Goindwal Sahib TPS and Long Term Tie-ups with upcoming central generating stations, the State will become power surplus and there will be no load shedding in the State from FY 2014-15 onwards. PSPCL also submitted in its ARR for FY 2014-15, three year CAGR from FY 2009-10 to FY 2012-13 after adjustment of load shedding hours and projected metered energy sale figures after taking into account adjustment on account of load shedding hours. The Commission, accordingly, approved the metered energy sales for FY 2014-15 in the Tariff Order for that year, after taking into account the effect of load shedding hours as projected by PSPCL in the ARR for FY 2014-15.

The Commission observes that with the commissioning of upcoming power stations in the State such as Talwandi Sabo TPS, Rajpura TPS, Goindwal Sahib TPS etc. and long term tie-ups with upcoming Central Generating Stations, the power scenario in FY 2015-16 will be same as that projected by PSPCL for FY 2014-15 in its ARR for FY 2014-15, and adjustment of units of load shedding hours has to be taken into account as done in the Tariff Order for FY 2014-15. PSPCL in the ARR has mentioned that the projections for metered energy sales for FY 2015-16 are based on category-wise 3 years Compounded Annual Growth Rate (CAGR) from FY 2010-11 to FY 2013-14. The Commission vide its letter no. 13250 dated 01.12.2014 asked PSPCL to provide energy sales figures for FY 2015-16 (projections) after adjustment of load shedding units. PSPCL vide letter no. 1229 dated 09.12.2014 submitted that the CAGR applied to the consumption of FY 2014-15 has already included the effect of power cuts imposed during the last year because CAGR in itself is not only due to increase in load but is also due to inherent growth and additional utilization of the existing load which is also due to increased power availability. The sale figures shown in the ARR of FY 2015-16 are optimum and it is expected that sales during FY 2015-16 shall not cross these figures. Any further increase in energy sales will result into un-realistic figures. However, the Commission observes that the projections are actually based on CAGR from FY 2010-11 to FY 2013-14 and do not include the units after adjustment of load shedding hours. The Commission has, thus, estimated the metered energy sales on 3 year CAGR from FY 2010-11 to FY 2013-14 basis, after adjusting of load shedding units, which are as per column IX of Table 4.1(B), and **the Commission approves the same.**

Table 4.1 (B): 3 Year CAGR (with sales figures after adjustment of load shedding units) & Estimated Energy Sales within the State for FY 2015-16

Sr. No.	Category	3 year CAGR determined by the Commission (FY 2010-11 to FY 2013-14)	3 year CAGR from FY 2009-10 to FY 2012-13 determined without adjustment of load shedding hours*	3 year CAGR from FY 2009-10 to FY 2012-13 determined after adjustment of load shedding hours**	Difference in 3 year CAGRs (V-IV)	3 year CAGR (FY2010-11 to FY 2013-14) after adjustment of load shedding hours (III+VI)	Energy Sales now approved for 2014-15 (RE) (MU)	Estimated Energy Sales for 2015-16 after adjustment of load shedding hours (VIII+VIIxVIII)
I	II	III	IV	V	VI	VII	VIII	IX
1	Domestic	8.93%	9.14%	11.75%	2.61%	11.54%	11490	12816
2	Non-Residential	6.86%	9.12%	11.75%	2.63%	9.49%	3245	3553
3	Small Power	2.57%	5.23%	5.23%	0.00%	2.57%	925	949
4	Medium Supply	2.53%	4.22%	4.22%	0.00%	2.53%	1942	1991
5	Large Supply	4.73%	2.83%	6.93%	4.10%	8.83%	11252	12245
6	Public Lighting	8.84%	2.61%	2.61%	0.00%	8.84%	185	201
7	Bulk Supply	4.78%	4.53%	4.53%	0.00%	4.78%	634	664
8	Railway Traction	-0.13%	-3.02%	-3.02%	0.00%	(-)0.13%	151	151
9	**Total metered sales (within the State)**						**29824**	**32570**

** Calculated by the Commission in Tariff Order for FY 2014-15 [Table 6.1 (A)]*
*** Calculated by the Commission in Tariff Order for FY 2014-15 [Table 6.1(B)]*

4.1.2 Energy Sales to Common Pool Consumers and Outside State Sale

PSPCL has projected energy sale to Common Pool consumers and Outside State energy sale for FY 2015-16 as below:

Category	FY 2014-15 (RE) (MU)	FY 2015-16 (Projections) (MU)
I	II	III
Common Pool Consumers	309	312
Outside State Sale	73	54

PSPCL has submitted that the energy sale to Common Pool consumers for FY 2015-16 has been projected based on the actual figures of energy sale to Common Pool consumers for FY 2013-14 and envisaged changes due to other provisions, and Outside State sale of energy for FY 2015-16 has been projected as 54 MU.

The Commission approves the Outside State sale at 54 MU and the energy sale of 312 MU to Common Pool consumers for FY 2015-16.

The total metered energy sales for FY 2015-16 projected by PSPCL and approved by the Commission are given in Table 4.2.

Table 4.2: Metered Energy Sales for FY 2015-16

(MU)

Sr. No.	Category	Projected by PSPCL for FY 2015-16	Approved by the Commission
I	II	III	IV
1.	Domestic	12515.67	12816
2.	Non-Residential	3468.21	3553
3.	Small Power	947.27	949
4.	Medium Supply	1991.86	1991
5.	Large Supply	11783.76	12245
6.	Public Lighting	203.41	201
7.	Bulk Supply	663.63	664
8.	Railway Traction	152.56	151
9.	**Total Metered Sales**	**31726.36**	**32570**
10.	Common Pool	312.00	312
11.	Outside State sale	54.00	54
12.	**Total Sales**	**32092.36**	**32936**

The Commission, thus, approves metered sales at 32936 MU against 32092.36 MU projected by PSPCL.

4.1.3 AP Consumption

PSPCL has projected AP consumption at 11374 MU for FY 2015-16 by applying growth of 5% over revised estimates of AP consumption of 10832 MU projected for FY 2014-15 (RE) in the ARR.

PSPCL has submitted that while estimating the revised sales for FY 2014-15, the agriculture consumption for first half of FY 2014-15 has increased to 8213 MU over the consumption of 7738 MU for first half of FY 2013-14, which showed considerable growth of 6.14%. Hence, the agriculture consumption for FY 2015-16 has to be projected by applying considerate growth rate for justifying the increasing trend of agriculture consumption. Further, PSPCL has considered growth in agricultural consumption for FY 2015-16 by 5% over the revised sales for FY 2014-15 and accordingly agriculture consumption has been projected for FY 2015-16 at 11374 MU (growth of 5% over revised estimated sales of 10832 MU for FY 2014-15).

The Commission has approved AP consumption for FY 2010-11 (True up) and FY 2011-12 (True-up) as 9656 MU and 9455 MU respectively, in the Tariff Order for FY 2014-15. Further, the Commission has approved AP consumption for FY 2014-15 (Review) as 10264 MU (in para 3.2.2). Further, the Commission has determined AP consumption for FY 2012-13 and FY 2013-14 as 9886 MU (provisional) and 9303 MU (provisional) respectively, on the basis of pumped energy data/information submitted by PSPCL in the ARR for FY 2015-16 and email dated 27.12.2014 and during the processing of ARR for FY 2015-16. The AP consumption projected by PSPCL for FY 2015-16 and AP consumption figures from FY 2010-11 to FY 2014-15 as discussed above are compiled in Table 4.3.

Table 4.3: AP Consumption projected by PSPCL and approved by the Commission

(MU)

Description	Projected by PSPCL for FY 2015-16 (MU)	AP Consumption (MU)				
		FY 2010-11 (True up) (MU)	FY 2011-12 (True up) (MU)	FY 2012-13 * (provisional) (MU)	FY 2013-14 * (provisional) (MU)	FY 2014-15 (Revised Estimates) (MU)
I	II	III	IV	V	VI	VII
AP Consumption	11374	9656	9455	9886	9303	10264

** assessed on the basis of pumped energy data/information supplied by PSPCL in the ARR for FY 2015-16 and email dated 27.12.2014 and during the processing of ARR for FY 2015-16.*

The Commission observes that there is no uniform pattern of increase/ decrease in AP consumption during the period from FY 2010-11 to FY 2014-15. In the years 2012-13 and 2014-15, AP consumption was more as compared to respective previous years, where as in the years 2011-12 and 2013-14, AP consumption was less as compared to respective previous years. Further, the increase/decrease in AP consumption was not uniform. The Commission also observed that there is unusual increase in AP consumption in FY 2014-15 as compared to FY 2013-14, because FY 2014-15 was relatively a dry year. Keeping in view that there is no fixed pattern of increase/decrease in AP consumption from FY 2010-11 to FY 2014-15, the Commission keeps the same level of AP consumption of 10264 MU for FY 2015-16 as fixed for FY 2014-15(RE). The Commission will revisit the AP consumption for FY 2015-16, while undertaking the Review/True up for FY 2015-16.

The Commission, thus, approves the AP consumption at 10264 MU for FY 2015-16, against 11374 MU projected by PSPCL.

4.1.4 Total Energy Demand (Sales)

The total metered energy sales, AP consumption, Common Pool and Outside State energy sales projected by PSPCL and as approved by the Commission for FY 2015-16 are given in Table 4.4.

Table 4.4: Total Energy Sales for FY 2015-16

(MU)

Sr. No.	Category	Projected by PSPCL for FY 2015-16	Approved by the Commission
I	II	III	IV
1.	Total Metered sales	31726	32570
2.	AP Consumption	11374	10264
3.	**Total sales within the State (1+2)**	**43100**	**42834**
4.	Common Pool	312	312
5.	Outside State sale	54	54
6.	**Total sales**	**43466**	**43200**

The Commission, thus, approves total energy sales to different categories of consumers at 43200 MU, including Common Pool and Outside State energy sales.

4.2 Transmission and Distribution Losses (T&D Losses)

PSPCL has submitted that T&D losses for FY 2015-16 have been projected after considering the expected improvement in the system as a result of planned capital works for distribution loss reduction programs. It has further been submitted that PSPCL has been taking steps to reduce the distribution loss through various loss reduction and network planning initiatives. PSPCL has claimed that considering the geographical spread of the service area and consumer base of PSPCL, loss level of 16.89% in FY 2013-14, 16.50% in FY 2014-15 & 16.00% as projected for FY 2015-16 is indicative of the efficiency performance of PSPCL. As per PSPCL, efforts to reduce losses below these levels would require huge investments and appropriate cost benefit analysis is essential as return in the form of loss reduction may not justify the investment in certain cases. PSPCL has further submitted that it has already achieved the T&D loss level of 16.89%, which includes transmission loss of 2.50%, and distribution loss level of 14.39% (excluding 2.5% of transmission loss) has already been at stagnancy and at this stage, it is important to maintain the current loss level, as further reduction would be difficult. PSPCL has further submitted that driven by the targets and directives given by the Hon'ble Commission, PSPCL is making concerted efforts to reduce and control the losses and is already recognized at par with some of the efficient utilities in the country. PSPCL has prayed to approve T&D loss level for FY 2015-16 at 16.00%, as projected in the ARR.

The Commission, in para 4.2 of the Tariff Order for FY 2013-14 and para 6.2 of the Tariff Order for 2014-15 had opined that reduction in losses should be attempted by PSPCL on the lines of South Korean Model of Distribution System, through which South Korea has been able to reduce its losses from 40% to 4% over the last three decades. PSPCL has not indicated, in the ARR for FY 2015-16, any action taken by it in the matter of reduction in losses on the lines of South Korean Model of Distribution System. Rather, same submissions have been made as made in the ARR for FY 2014-15. PSPCL is again advised to study the South Korean Model of Distribution System and initiate action accordingly. Further, some meaningful audit of T&D losses in the areas of high T&D losses, as already directed in the Tariff Order for FY 2014-15, be also carried out and action initiated accordingly for reduction of T&D losses. PSPCL is again directed to submit action taken report in the matter within 3 months of issue of Tariff Order.

The Commission has decided to retain T&D losses of PSPCL for FY 2014-15 at 16.00% as fixed by the Commission in the Tariff Order for FY 2014-15 against the proposed loss level of 16.50% for FY 2014-15. The Abraham Committee envisaged a normative loss reduction of 1% annually, where the losses in a particular entity are below 20%. **However, the Commission fixes T&D loss target for FY 2015-16 at 15.50%, in view of above discussion.**

The Commission is of the view that the losses are to be separately considered and approved for PSTCL and PSPCL. Since PSTCL is still in the process of installing intra-state boundary metering and could not provide the required data to estimate losses for PSTCL system separately, the Commission decides to stipulate only overall target T&D losses, with segregation into transmission loss for PSTCL system and distribution loss for PSPCL system within the overall target, pending final adjustment between PSTCL and PSPCL based on actual data at a later stage.

Keeping the overall T&D loss level of 15.50% as the target set for FY 2015-16 and based on the provisionally approved Transmission Loss of 2.50% for PSTCL for FY 2015-16 in the Tariff Order for PSTCL for FY 2015-16, the target Distribution Loss (66 kV and below system) of PSPCL for FY 2015-16 works out to 13.55% (as depicted in Table 4.5 below), which the Commission approves provisionally. The Commission will revisit the Distribution Loss of PSPCL while undertaking Review/True up for FY 2015-16.

4.3 Energy Requirement

The total energy requirement is the sum of estimated energy sales including Common Pool and Outside State sales and T&D losses. The projected energy sales, T&D losses and energy requirement as reported by PSPCL and as approved by the Commission for FY 2015-16 are given in Table 4.5.

Table 4.5: Energy Requirement for FY 2015-16

(MU)

Sr. No.	Category	Projected by PSPCL for FY 2015-16	Approved by the Commission
I	II	III	IV
1.	Metered sales within the State	31726	32570
2.	AP Consumption	11374	10264
3.	**Total sales within the State (1+2)**	**43100**	**42834**
4.	Common Pool sales	312	312
5.	Outside State sale	54	54
6.	**Total sales (3+4+5)**	**43466**	**43200**
7. (a)	T&D losses on Sr. No. 3 (%)	16.00%	15.50%
7. (b)	T&D losses on Sr. No. 3	8210	7857
8.	**Total energy input required [6+7(b)]**	**51676**	**51057**
9.	**Energy at Transmission periphery to be sold within the State (8-4-5)**		**50691**
10. (a)	Transmission Loss (%) on Sr. No. 9		2.50%
10. (b)	Transmission Loss on Sr. No. 9		1267
11.	Energy available to PSPCL [9-10(b)-798*]		48626
12. (a)	Distribution Loss		6590
12. (b)	Distribution Loss (%)		13.55%
13.	**Energy available for Sale to consumers within the State [11-12(a)+798*]**		**42834**

**Energy sale at 220/132 kV voltage level.*

4.4 PSPCL's own Generation

4.4.1 Thermal Generation

PSPCL has projected gross thermal generation for FY 2015-16 at 2646 MU for GNDTP, 8600 MU for GGSSTP and 7195 MU for GHTP.

Plant Availability

- The plant availability of GNDTP for FY 2015-16 has been projected at 88.94%, based on maintenance/overhauling schedule. The maintenance/ annual overhauling of units I, II & IV is planned for 30 days each.
- The plant availability of GGSSTP for FY 2015-16 has been projected at 90.52%, based on maintenance/overhauling schedule. The maintenance/ overhauling is planned for unit-I for 25 days, unit-IV for 30 days, unit-V for 35 days and unit-VI for 30 days.
- The plant availability for GHTP for FY 2015-16 has been projected at 96.50% based on maintenance/overhauling schedule. The maintenance/ overhauling is planned for unit-III for 7 days and unit-IV for 20 days.

The availability of GNDTP, GGSSTP and GHTP based on maintenance schedules (excluding forced outages) for FY 2015-16, has been determined by the Commission as 93.85%, 94.54% and 98.16% respectively.

The Commission has assessed availability and generation for GNDTP, GGSSTP and GHTP for FY 2015-16 based on average of actual availability and average of actual generation during FY 2011-12, FY 2012-13 and FY 2013-14. The availability based upon actual number of maintenance days (including periods of forced outages, if any) and actual generation of GNDTP, GGSSTP and GHTP as discussed above, along with average generation and availability have been worked out in Table 4.6.

Table 4.6: Availability and Generation for GNDTP, GGSSTP and GHTP

Sr.No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	Average
I	II	III	IV	V	VI
1.	**GNDTP**				
	Generation (MU)	1883	1632	1635	1717
	Availability	59.93%	54.65%	63.95%	59.51%
2.	**GGSSTP**				
	Generation (MU)	9564	9167	8006	8912
	Availability	91.36%	92.11%	89.84%	91.10%
3.	**GHTP**				
	Generation (MU)	7621	7215	6665	7167
	Availability	96.55%	93.84%	97.30%	95.90%

Considering the projected availability in FY 2015-16 worked out by the

Commission as above and the average availability and generation as worked out in Table 4.6, gross generation for FY 2015-16 for GNDTP, GGSSTP and GHTP has been computed in Table 4.7.

Table 4.7: Availability, Gross Generation and PLF of GNDTP, GGSSTP and GHTP for FY 2015-16

Sr. No.	Station	Three years average availability	Three years average generation (MU)	Computed by the Commission for FY 2015-16		
				Availability as per maintenance schedule for FY 2015-16	Generation (MU) ((IV*V)/III)	PLF (calculated)
I	II	III	IV	V	VI	VII
1.	GNDTP	59.51%	1717	93.85%	2708	67.01%
2.	GGSSTP	91.10%	8912	94.54%	9249	83.57%
3.	GHTP	95.90%	7167	98.16%	7336	90.78%

Total gross generation from the thermal generating plants during FY 2015-16 will, therefore, be as shown in Table 4.8.

Table 4.8: Gross Thermal Generation for FY 2015-16

(MU)

Sr. No.	Station	Approved generation
I	II	III
1.	GNDTP	2708
2.	GGSSTP	9249
3.	GHTP	7336
4.	**Total**	**19293**

Accordingly, the Commission assesses the total gross thermal generation for FY 2015-16 as 19293 MU against 18441 MU projected by PSPCL in the ARR for FY 2015-16.

Performance Parameters

PSERC Tariff Regulations provide that for determining the cost of generation of each generating station, the Commission shall be guided, as far as feasible, by the principles and methodology of CERC, as amended from time to time. This approach has been adopted consistently by the Commission in its Tariff Orders from FY 2005-06 onwards. CERC vide its notification no. L-1/144/2013/CERC dated 21.02.2014 has notified Terms and Conditions of Tariff Regulations, 2014 for electricity tariff for the five year period beginning from 01.04.2014, wherein operating norms for thermal plants have also been prescribed. The Commission followed these norms for FY 2014-15 in the Tariff Order for FY 2014-15, and decides to follow these norms for FY 2015-16 also. CERC, has, however, not specified any norms for 110/120 MW units and the Commission had, in the case of GNDTP, adopted the norms specified for Tanda Thermal Power Generating Station of NTPC, which has 4 units of 110 MW each. The Commission notes that units I, II, III and IV of GNDTP have achieved commercial operation on 31.05.2007, 19.01.2006, 07.12.2012 and 27.09.2014 respectively, after completion of renovation and modernization. The individual performance parameters have been further discussed, later in this chapter.

Auxiliary Consumption and Net Generation

The Commission has adopted CERC norms for assessment of net generation of GGSSTP and GHTP. CERC in its Tariff Regulations, 2014 has specified auxiliary energy consumption of 12% (same as specified in its Tariff Regulations, 2009) for Tanda Thermal Power Station, which has units of 110 MW capacity, similar to GNDTP. The Commission had considered various issues and submissions regarding the auxiliary consumption of GNDTP units in para 2.4.1 of the Tariff Order for FY 2010-11 and accordingly fixed the auxiliary consumption for FY 2008-09 at 11%. The same was adopted in subsequent Tariff Orders. The submissions made by PSPCL in the ARR for FY 2015-16 regarding Auxiliary Consumption for GNDTP units have been considered by the Commission in para 3.5.1. However, the Commission decided to allow Auxiliary Consumption for GNDTP units at 11.00% for FY 2014-15 (review). Accordingly, the Commission decides to fix auxiliary consumption for GNDTP at 11.00% for FY 2015-16 also. As per CERC Regulations for the period 2014-19, the norm for auxiliary energy consumption for coal based generating stations of 200 MW series is 8.5% with Natural Draft cooling tower or without cooling tower. Further, as per proviso to this regulation, the norm for thermal generating stations with induced draft cooling towers, shall be further increased by 0.5%. As per further proviso to this regulation, additional auxiliary energy consumption as under is permissible for plants with dry cooling system:

Type of Dry Cooling System	% of gross generation
Direct cooling air cooled condensers with mechanical draft fans	1%
Indirect cooling system employing jet condensers with pressure recovery turbine and natural draft tower	0.5%

PSPCL in the ARR for FY 2015-16 has projected auxiliary consumption based on the normative parameters as 8.5% for GGSSTP and GHTP. In reply to a query raised by the Commission, PSPCL has intimated that GHTP has cooling towers and nothing more has been intimated as to the type of cooling towers. As such, for GGSSTP and GHTP, the Commission decides to fix auxiliary consumption at normative value of 8.5% for FY 2015-16 as projected by PSPCL in the ARR.

Auxiliary consumption and net generation from the three thermal generating stations, as projected by PSPCL and as approved by the Commission for FY 2015-16 are given in Table 4.9.

Table 4.9: Generation and Auxiliary Consumption for Thermal Plants for FY 2015-16

(MU)

Sr. No.	Station	Projected by PSPCL			Approved by the Commission		
		Gross generation	Auxiliary consumption	Net generation	Gross generation	Auxiliary consumption	Net generation
I	II	III	IV	V	VI	VII	VIII
1.	GNDTP	2646	291 11.00%	2355	2708	298 11.00%	2410
2.	GGSSTP	8600	731 8.50%	7869	9249	786 8.50%	8463
3.	GHTP	7195	612 8.50%	6583	7336	624 8.50%	6712
4.	**Total**	**18441**	**1634**	**16807**	**19293**	**1708**	**17585**

Net thermal generation approved by the Commission for FY 2015-16 is 17585 MU, against 16807 MU projected by PSPCL.

4.4.2 Hydel Generation

In the ARR petition for FY 2015-16, PSPCL has projected hydel generation for FY 2015-16 from its own stations, based on average of last three years i.e. during FY 2011-12, FY 2012-13 and FY 2013-14. The Commission has also estimated the hydel generation, based on the average of three years i.e. FY 2011-12, FY 2012-13 and FY 2013-14. The generation projected by PSPCL and the generation approved by the Commission are given in Table 4.10.

Table 4.10: Own Hydel Generation for FY 2015-16

(MU)

Sr. No.	Station	Generation projected by PSPCL for FY 2014-15	Actual generation			Generation approved by the Commission (Based on 3 years average)
			FY 2011-12	FY 2012-13	FY 2013-14	
I	II	III	IV	V	VI	VII
1.	Shanan	525	517	439	356	437
2.	UBDC Stage 1	185	146	143	195	161
3.	UBDC Stage 2	184	149	176	167	164
4.	RSD	1523	1928	1428	1576	1644
5.	MHP	1067*	1358	1421	1247	1409#
6.	ASHP	720	807	639	735	727
7.	Micro Hydel	9	4	8	11	8
8.	**Total own hydel generation (gross)**	**4213**	**4909**	**4254**	**4286**	**4550**

** Includes 67 MU of MHP Stage-II.*

 # Includes 67 MU of MHP Stage-II as projected by PSPCL in the ARR for FY 2015-16.

The Commission approves estimated gross generation of 4550 MU from PSPCL's own hydel stations. The Commission also approves PSPCL's share (net) from BBMB at 4107 MU and Common Pool share at 312 MU as projected by PSPCL for FY 2015-16. The total hydel generation approved by the Commission is depicted in Table 4.11.

Table 4.11: Total Hydel Generation for FY 2015-16

(MU)

Sr. No.	Station	Projected by PSPCL for FY 2015-16	Approved by the Commission
I	II	III	IV
1.	Shanan	525	437
2.	UBDC Stage 1	185	161
3.	UBDC Stage 2	184	164
4.	RSD	1523	1644
5.	MHP	1067	1409
6.	ASHP	720	727
7.	Micro hydel	9	8
8.	**Total own generation (Gross)**	**4213**	**4550**
9.	Auxiliary consumption and transformation loss	12	38 *
10.	HP share in RSD	66	76**
11.	**Total own generation (Net)**	**4135**	**4436**
12.	**PSPCL share from BBMB**		
(a)	PSPCL share (Net)	4107	4107
(b)	Common pool share (Net)	312	312
13.	**Total from BBMB (Net)**	**4419**	**4419**
14.	**Total hydro (Net) (Own + BBMB)**	**8554**	**8855**

** Transformation losses @0.5% (23 MU), auxiliary consumption @0.5% for RSD generation of 1644 MU and UBDC stage-1 generation of 161 MU (having static exciters) and @0.2% for others (15 MU).*

*** HP share @4.6% in RSD (76 MU).*

The Commission, thus, approves net hydel generation of 8855 MU for FY 2015-16, against 8554 MU projected by PSPCL.

4.4.3 Total availability of energy from PSPCL's own stations and share from BBMB

The approved net generation from own thermal and hydel stations of PSPCL and share from BBMB is given in Table 4.12.

Table 4.12: Net Own Generation and share from BBMB for FY 2015-16

(MU)

Sr. No.	Station	Energy available (ex-bus)
I	**II**	**III**
1.	Thermal stations	17585
2.	Hydel stations	4436
3.	Share from BBMB (including 312 MU share of Common Pool consumers)	4419
4.	**Total availability**	**26440**

The Commission approves the total energy availability from PSPCL's own generating stations (thermal and hydel) including share from BBMB as 26440 MU.

4.5 Purchase of Power

4.5.1 The total energy required to meet the demand during FY 2015-16 including Common Pool and Outside State sales is 51057 MU as discussed in para 4.3. The energy available from own generating stations of PSPCL including its share from BBMB is 26440 MU as approved in para 4.4.

4.5.2 The balance energy requirement of 24617 MU (net) has to be met through purchase from Central Generating Stations and other sources. This is against a requirement of 26315 MU (net) projected by PSPCL for FY 2015-16.

4.6 Energy Balance

The energy balance, which takes into account the approved energy sales to different categories of consumers, T&D losses and energy availability, is given in Table 4.13.

Table 4.13: Energy Balance for FY 2015-16

(MU)

Sr. No.	Particulars	Projected by PSPCL for FY 2015-16	Approved by the Commission
I	II	III	IV
A) Energy Requirement			
1.	Metered Sales	31726	32570
2.	AP Consumption	11374	10264
3.	**Total Sales within the State**	**43100**	**42834**
4.	T & D Losses (%) on Sr. No. 3	16.00%	15.50%
5.	T & D losses on Sr. No. 3	8210	7857
6.	Sales to Common pool consumers	312	312
7.	Outside State Sale	54	54
8.	**Total Requirement**	**51676**	**51057**
B) Energy Available			
9.	Own generation (Ex-bus)		
(a)	Thermal	16807	17585
(b)	Hydro	4135	4436
10.	Share from BBMB (including share of Common Pool consumers)	4419	4419
11.	Purchase (net)	26315*	24617
12.	**Total Availability**	**51676**	**51057**

** Against wrongly worked out/shown figure of 26314 MU.*

4.7 Fuel Cost

4.7.1 Fuel Cost projected by PSPCL

PSPCL has projected fuel cost of ₹5360.10 crore for a total gross generation of 18441 MU during FY 2015-16 based on operational and cost parameters as detailed in Table 4.14.

Table 4.14: Operation and Cost Parameters projected by PSPCL for FY 2015-16

Sr. No.	Station	PLF (%)	Station heat rate (kCal/kWh)	Transit loss of coal (%)	Coal price excluding transit loss (domestic coal) (₹/MT)	Coal price excluding transit loss (imported coal) (₹/MT)	Calorific value of coal (kCal/Kg)	Price of oil (₹/kL)	Specific oil consumption (ml/kWh)	Calorific value of oil (kCal/lt)
I	II	III	IV	V	VI	VII	VIII	IX	X	XI
1.	GNDTP	65.48	2750.00	1.50	3745.67	—	4100.00	50774.17	1.50	9400
2.	GGSSTP	77.70	2544.20	1.00*	4147.92	9300.00	4209.00	49148.03	1.00	9700
3.	GHTP	89.03	2438.00	1.00*	3801.66	9300.00	4299.20	55581.00	0.50	9500

**1.00 for domestic coal and 0.20 for imported coal.*

4.7.2 PSPCL has submitted that the weighted average price and calorific value of oil and coal for FY 2015-16 have been projected same as actual for first half of FY 2014-15. PSPCL has further submitted that any variation in fuel price and

GCV is pass through as per recovery of energy and capacity charges provided in PSERC Tariff Regulations 2005 as amended from time to time.

4.7.3 With regard to various performance parameters, PSPCL has submitted as under:

A. Station Heat Rate (SHR)

(i) For GNDTP, the Hon'ble Commission has approved SHR of 2750 kCal/kWh for FY 2014-15 based on CERC norms for Tanda TPS (after its R&M), as specified in CERC Tariff Regulations, 2014. PSPCL has achieved the SHR of 2756.55 kCal/kWh for H1 of FY 2014-15. In order to maintain the SHR as per CERC norms, PSPCL has considered the SHR of 2744.58 kcal/kWh for H2 of FY 2014-15 and 2750 kCal/kWh for FY 2015-16.

(ii) For GHTP, the Hon'ble Commission has approved different SHR as 2450 kCal/kWh for Unit I & II and 2428 kCal/kWh for Unit III & IV. The approach adopted by the Hon'ble Commission for stipulating SHR for Units is not prudent. The SHR needs to be assessed station wise as some energy from the particular unit such as FO tank heating is used for common services of GHTP units. Also, the SHR increases with aging of the units and is prone to increase during the backing down of units. Accordingly, PSPCL has considered the heat rate of 2438 kCal/kWh for H2 of FY 2014-15 and FY 2015-16. PSPCL has prayed the Hon'ble Commission to consider SHR of 2450 kCal/kWh for GHTP station as a whole.

(iii) For GGSSTP, the Hon'ble Commission has approved the SHR of 2450 kCal/kWh based on CERC norms specified in CERC Tariff Regulations, 2014. The actual SHR achieved in H1 of FY 2014-15 at 2674.75 kCal/kWh is higher than the approved figure. Considering the actual performance of Stations, PSPCL has considered the SHR of 2595.26 kCal/kWh for H2 of FY 2014-15 and 2544.20 kCal/kWh for FY 2015-16.

B. Price of Coal and Oil

The weighted average price and calorific value for coal and oil has been estimated to remain same as actual for first half of FY 2014-15. Any variation in fuel price and GCV is pass through as per the recovery of energy and capacity charges provided in Fuel Cost Adjustment in line with PSERC (Conduct of Business) Regulations, 2005 as amended from time to time.

C. Transit Loss of Coal

Although the transit losses for all the plants in H1 of 2014-15 are negative, it has been observed from past trends that the coal transit losses are inconsistent for all the three plants. The coal transit losses are not within the control of PSPCL and attributable to the following reasons:

(i) Calibration of measuring instruments:- Weighing of coal at two different locations having different calibration of weighing machines leads to an error more than permissible limits.

(ii) The transit loss occurs because of seasonal variation during the transportation of the coal, which changes the moisture content of the coal during the transportation.

(iii) The transportation of coal happens through open wagons. As soon as, the goods are loaded on the wagon, it becomes owner's risk and railways disown the responsibility. Coal is subject to pilferages at all halts, which is beyond the control of railways.

(iv) During unloading, small quantities of coal get stuck at the edges of the transport wagons due to moisture and remain undelivered to the plant, contributing to transit losses.

(v) PSPCL has considered the normative transit losses of 1.5% for GNDTP and 1% for GHTP and GGSSTP for estimating the fuel cost.

PSPCL has quoted various judgments of Hon'ble APTEL for allowing the technical performance of thermal generating stations at relaxed levels.

4.7.4 Imported Coal Blending for GGSSTP and GHTP

PSPCL has submitted in the ARR that at present, the requirement of coal for its plants is sourced partially from PSPCL's captive coal mine i.e. Pachwara (Central) coal block and from CIL subsidiaries.

M/s PANEM Coal Mines Ltd. is supplying coal to PSPCL thermal generating stations from Pachwara (Central) mine of PSPCL since March, 2006 as per Coal Purchase Agreement dated 30th August, 2006. After December, 2012, the coal supplies from PANEM Coal Mines to thermal generating stations became irregular. From 1st April, 2014 to 31st August, 2014, M/s PANEM Coal Mines Limited, on an average, has supplied 2.5 rakes per day against linkage of 5 rakes per day.

PSPCL has a dedicated coal washery set up by M/s Monnet Daniels Coal Washeries Pvt. Ltd. on BOO basis for supplying raw coal, after washing, exclusively to PSPCL thermal generating stations. However, linkage materialization from M/s Monnet has been poor since inception of washery and was just 41% in FY 2013-14 and is 43% in FY 2014-15 (upto August, 2014). M/s Monnet is emphasizing that the non-availability of adequate quality coal with CCL is resulting into less lifting of raw coal and consequential dispatch of washed coal to PSPCL.

The continuous short supplies vis-à-vis requirement of PSPCL thermal generating stations from M/s PANEM Coal Mines and M/s Monnet has resulted into depletion in coal stocks at PSPCL thermal generating stations. Such critical coal stock leads to decrease in generation against the generation approved by the Hon'ble Commission.

In view of this, to meet the required generation, PSPCL has to arrange the additional coal supplies. For such additional coal supply, PSPCL has considered the option of importing the coal.

PSPCL has considered the option of high GCV imported coal (having GCV of about 6300 Kcal/Kg) to meet with the coal requirement of PSPCL thermal generating stations for FY 2015-16. The high GCV imported coal shall have to be used after blending with indigenous coal in the ratio of 82:18 (82 indigenous and 18 imported). GNDTP has shown its inability to use imported coal after blending with indigenous coal due to practical constraints. Hence, imported coal blending has been considered for GGSSTP and GHTP. The transit loss of 0.2% has been considered for imported coal as per CERC Tariff Regulations, 2014. The landed price of the imported coal has been assumed at ₹9300/MT.

4.7.5 PSPCL has submitted that as per decision of the Hon'ble Supreme Court of India, the surcharge of ₹295 per MT on the coal mined from the Pachawara (Central) Coal block is payable and the total implication of the same with respect to the coal mined from Pachwara mines since 2006 works out to be ₹1503 crore. PSPCL has submitted that the actual impact of the same shall be claimed as pass through as and when the same is paid and the manner in which the same is paid. PSPCL has also filed a separate petition (No. 13 of 2015) in this matter, which is being separately processed by the Commission.

4.7.6 Fuel Cost approved by the Commission

Gross Generation

The gross generation of thermal plants for FY 2015-16 has been discussed in para 4.4.1 and summarized in Table 4.8.

Imported Coal blending for GGSSTP & GHTP

PSPCL has projected use of imported coal at GGSSTP and GHTP in view of uncertain supplies from PANEM and Monnet as brought out above. PSPCL in its petition no. 59 of 2014 had sought the approval of the Commission for importing coal during second half of FY 2014-15, which was disposed of by the Commission vide its Order dated 05.11.2014. PSPCL filed an Appeal (No. 19 of 2014) with the Hon'ble APTEL against the Order of the Commission, which has been disposed of by the Hon'ble APTEL vide its Order dated 25.02.2015, as reproduced below:

> *"Having heard learned counsel for the parties we are of the opinion that since the financial year 2014-15 is almost over, the appropriate course for the appellant would be to give their proposal for importing coal and financial implication thereof in the ARR for the financial year 2015-16 for consideration and appropriate orders by the State Commission.*
>
> *Appeal is disposed of in terms of the above observation."*

PSPCL vide its letter no. 5242 dated 10.03.2015, giving reference to the above Order of the Hon'ble APTEL, has requested the Commission to consider to include tentative cost of imported coal in the ARR for FY 2015-16 as per the petition already filed by PSPCL for determination of tariff.

In the ARR for FY 2015-16, PSPCL has not projected any requirement of imported coal during second half of FY 2014-15. As such, the Commission has not considered imported coal for determining fuel cost for FY 2014-15 in its Review in Chapter 3 of this Tariff Order.

The following options may also be examined before initiating process of importing coal:

(a) e-auction of Coal

(b) Inviting bids from CIL companies

(c) Participating in tenders floated for sale of coal by domestic producers

Further, the cost of imported coal may be considerably higher than the Indian coal even after accounting for higher GCV of imported coal.

The Commission directs PSPCL to explore various options of arranging the shortfall in coal, if any, in availability of coal from the tied up sources for its own thermal generating stations and should arrange the coal from alternative domestic sources and imported coal should be procured in most economical manner, if at all the need for the same arises and submit the details of the same at the time of review/true up of FY 2015-16. PSPCL should also keep in view the availability of surplus power from various sources as projected in the ARR and ensure that the power is surrendered strictly as per merit order principle. PSPCL may take into consideration any variation in fuel cost, including on account of coal from alternative domestic sources/imported coal, while working out FCA.

Station Heat Rate

The CERC has laid down norms of gross SHR for coal based thermal stations as given in Table 4.15.

Table 4.15: CERC Norms for Gross Station Heat Rate

Sr. No.	Capacity of Unit / Name of Plant	SHR norms (kCal/kWh)
I	**II**	**III**
1.	200/210/250 MW Sets	2450
2.	500 MW Sets (Sub-critical)	2375
3.	Talcher Thermal Power Station	2850
4.	Tanda Thermal Power Station	2750

On the above basis, the Commission approves SHR at 2450 kCal/kWh for GGSSTP and for GHTP Units I & II. After analysis of the issue of SHR for units III and IV of GHTP in paras 2.7.5 and 3.7.5 of the Tariff Order for FY 2014-15, the Commission determined and decided to approve SHR of 2428 kCal/kWh for units III and IV of GHTP for FY 2010-11, FY 2011-12, FY 2013-14 and FY 2014-15 in the Tariff Order for FY 2014-15. The Commission decides to allow SHR for GHTP Units III & IV at 2428 kCal/kWh for FY 2015-16 also, since same formulation has been specified by CERC in its Tariff Regulations, 2014, as specified in its Tariff Regulations, 2009. As CERC has not specified any norms for 110/120 MW units, the Commission decides to allow SHR of 2750 kCal/kWh for GNDTP units based on CERC norms for Tanda TPS (after its R&M), as specified in CERC Tariff Regulations, 2014.

Coal Transit Loss

PSPCL in its ARR for FY 2015-16 has projected transit loss of coal for FY 2015-16 at 1.50% for GNDTP, 1.00% for GGSSTP and GHTP for domestic/indigenous coal. For imported coal for GGSSTP and GHTP, PSPCL has projected transit loss of coal as 0.2%, as per CERC Tariff Regulations.

The Commission in its Tariff Order for FY 2012-13, after considering the whole issue of transit loss, decided to cap the maximum transit loss of coal at 1.0% for FY 2013-14 & onwards.

CERC, in its Tariff regulations, 2014, has specified the transit loss of 0.2% for pit-head thermal generating stations and 0.8% for non pit-head thermal generating stations.

In view of the above, the Commission approves the transit loss (for domestic coal) for all the thermal generating stations of PSPCL as per actual, subject to a maximum of 1.0%, for FY 2015-16. However, no such loss is permissible in case same is priced on FOR destination basis.

Price and Calorific Value of Coal and Oil

Fuel cost being a major item of expense, the actual calorific value & price of coal & oil and transit loss of coal for the first six months of FY 2014-15 were validated and the results are given in Table 4.16.

Table 4.16: Validated Calorific Value/Price of Coal and Oil and Transit Loss of Coal for FY 2014-15 (H1)

Sr. No.	Station	Gross calorific value of coal as received (kCal/kg)	Calorific Value of Oil (kCal/lt)	Price of Oil (₹/kL)	Price of coal (₹/MT) (Excluding Transit Loss)	Transit Loss (%)
I	II	III	IV	V	VI	VII
1.	GNDTP	4126.91	9371.63	50774.43	3742.47	(-)1.41
2.	GGSSTP	3866.98	9791.83	49148.15	4149.88	(-)0.76
3.	GHTP	3943.78	9858.13	55581.42	3798.07	(-)0.46

In working out the fuel cost for FY 2015-16, the Commission has considered the calorific value of oil & coal as validated for first six months of FY 2014-15, as given in Table 4.16. The price of coal and oil has been considered by increasing the above validated values by 5%, to account for change in price during FY 2015-16. CERC in its Tariff Regulations, 2014 has considered the gross calorific value of coal as received, for working out the energy charges (fuel cost) in respect of coal based thermal stations. The Commission accordingly decides to consider the gross calorific value of received coal for working out the fuel cost for FY 2015-16. The figures of gross calorific value of coal as given in column III of Table 4.16 are gross calorific values of coal as received, as validated by the Commission for the period from April, 2014 to September, 2014. The price and calorific value of coal indicated above are the weighted average values of coal, including coal from Pachhwara mine.

Specific oil consumption

PSPCL has projected specific oil consumption at GNDTP, GGSSTP and GHTP as 1.50, 1.00 and 0.50 ml/kWh respectively.

The Commission has adopted CERC norms for specific oil consumption as in the case of other performance parameters of thermal plants. **As per CERC Tariff Regulations, effective from 01.04.2014, the Commission approves 0.5 ml/kWh specific oil consumption for GNDTP, GGSSTP and GHTP.**

Table 4.17: Fuel Cost (Coal and Oil) for FY 2015-16

Sr. No.	Item	Derivation	Unit	GNDTP	GGSSTP	GHTP Unit I & II	GHTP Unit III & IV	Total
I	II	III	IV	V	VI	VII	VIII	IX
1.	Generation	A	MU	2708	9249	3477*	3859*	**19293**
2.	Heat Rate	B	kcal/kWh	2750	2450	2450	2428	
3.	Specific oil consumption	C	ml/kWh	0.5	0.5	0.5	0.5	
4.	Calorific value of oil	D	kcal/litre	9371.63	9791.83	9858.13	9858.13	
5.	Calorific value of coal	E	kcal/kg	4126.91	3866.98	3943.78	3943.78	
6.	Overall heat	F = (A x B)	Gcal	7447000	22660050	8518650	9369652	
7.	Heat from oil	G = (A x C x D) / 1000	Gcal	12689	45282	17138	19021	
8.	Heat from coal	H = (F-G)	Gcal	7434311	22614768	8501512	9350631	
9.	Oil consumption	I=(Gx1000)/D	KL	1354	4624	1738	1929	
10.	Transit loss of coal	J	(%)	1	1	1	1	
11.	Total coal consumption excluding transit loss	K=(Hx1000)/E	MT	1801423	5848173	2155676	2370982	
12.	Quantity of coal from Pachhwara Coal Mine	L	MT	1200000	0	0	0	
13.	Quantity of coal other than PANEM coal (excluding transit loss)	M=K-L	MT	601423	5848173	2155676	2370982	
14.	Quantity of coal other than PANEM coal including transit loss	N=M/(1-J/100)	MT	607498	5907245	2177451	2394931	
15.	Total quantity of coal	O=L+N	MT	1807498	5907245	2177451	2394931	
16.	Price of oil	P	₹/KL	53313.15	51605.56	58360.49	58360.49	
17.	Price of coal	Q	₹/MT	3929.59	4357.37	3987.97	3987.97	
18.	Total cost of oil	$R=P \times I / 10^7$	₹crore	7.22	23.86	10.14	11.26	52.48
19.	Total cost of coal	$S=O \times Q/10^7$	₹crore	710.27	2574.01	868.36	955.09	5107.73
20.	**Total fuel cost**	**T=R+S**	**₹crore**	**717.49**	**2597.87**	**878.50**	**966.35**	**5160.21**
21.	**Per unit fuel cost**	**U=Tx10/A**	**₹/kWh**	**2.65**	**2.81**	**2.53**	**2.50**	**2.67**

** worked out on proportionate basis as per data provided by PSPCL in the ARR (Vol-II).*

Based on the generation and operational parameters approved by the Commission, cost of fuel for FY 2015-16 works out to ₹5160.21 crore for thermal generation of 19293 MU (gross) as detailed in Table 4.17, which the Commission approves.

4.8 Power Purchase

4.8.1 **Projection by PSPCL:** PSPCL has projected power purchase cost of ₹11488.12 crore (excluding intra state transmission & wheeling charges of ₹931.08 crore payable to PSTCL as projected by PSPCL in the ARR) for purchase of 26917.66 MU (gross) during FY 2015-16. PSPCL has submitted in the ARR and Tariff Petition that in order to optimize the cost of power procured, PSPCL has scheduled its power procurement from various central generating stations on the merit order principles. PSPCL has submitted that in the merit order process, sources of power have been considered in ascending merit order of variable cost. Sources of power with the lowest variable cost/unit have been scheduled to be procured first (base load) and those with the highest cost/unit at last (peak load). Sources with equal merit order have been considered together in proportion to their available capacity. The power purchase expenses as determined through such optimal order dispatch after due consideration for contractual obligations, technical constraints and load profiles during various seasons, have been proposed for approval. PSPCL has further submitted that State of Punjab receives fixed allocation from central generating stations based on its allocation from respective stations. Moreover, the State also receives a quantum of power from the unallocated share in various central generating stations at different intervals during a year. Further, PSPCL is also proposing to purchase power from Independent Power Producers (IPPs) including Talwandi Sabo TPS, Rajpura TPS, Goindwal Sahib TPS etc.

The following power plants as given in Table 4.18 have also been considered by PSPCL for assessing energy availability during FY 2015-16. PSPCL has submitted that the commissioning schedule has been taken as per the commitments received from concerned generating company/authority and energy availability has been projected accordingly, as no firm schedule is available.

Table 4.18: Details of New Power Plants

Sr. No.	Name of the plant	Plant Capacity (MW)	PSPCL share gross (MW)	Commissioning Schedule
1.	Koldam HEP (NTPC)	4x200=800 MW	111	Mar-15 (Unit-1) Apr-15 (Unit-2) May-15 (Unit-3) June-15 (Unit-4)
2.	Sasan Ultra Mega TPS (Reliance)	3960 MW (6 Unit)	558.36	Unit-1 to 5 already commissioned Dec- 2014 (Unit-6)
3.	Rampur HEP (BHEL)	6X68.7=412 MW	42	Unit-6 (already synchronized)
4.	Talwandi Sabo TPS (Sterlite)	3x660 = 1980MW	1860	Unit-1 already commissioned Jan-2015 (Unit-2) March- 2015 (Unit-3)
5.	Goindwal Sahib TPS (GVK)	2x270 = 540 MW	540	Apr-2015 (Unit-1) Sept-2015 (Unit-2)
6.	Mukerian Hydel Project Stage-II	9x2 = 18 MW	18	Jun-2015
	Total		**3129.36 MW**	

PSPCL has submitted that projected energy from all central thermal generating stations with allocated share to PSPCL for FY 2015-16 has been taken the same as the energy for the previous year i.e. FY 2013-14 and from central hydro generating stations the allocated share to PSPCL has been based upon the average of the energy for the last three years i.e. FY 2011-12 to FY 2013-14. In case of new projects in the central sector, projected energy has been calculated in accordance with the CEA regulations/designed energy as mentioned in the PPAs. In case of upcoming private power plants in the State, the energy availability has been projected based on the date of commissioning, availability based on stabilization period and normative plant load factor. The projections in respect of Talwandi Sabo TPS and Goindwal Sahib TPS are based on availability of 65% and PLF of 80%. The projections in respect of Rajpura TPS are based on availability of 100% and PLF of 85%.

PSPCL has further submitted that it shall be having surplus energy available from tied up sources from central generating stations and upcoming IPPs in the State. In order to manage demand and maintain energy balance, the surplus energy has been surrendered. Surrender of energy has been done as per the merit order of power purchase from the existing thermal and gas plants. The merit order has been based upon the projected variable rates assumed for FY 2015-16. After surrender of energy, only variable charges have been reduced and fixed / other charges have been assumed the same. PSPCL has submitted that 15383 MU shall be surrendered during FY 2015-16.

The projections regarding energy availability, energy scheduled and energy surrendered from various sources, made by PSPCL in the ARR, are as given in Table 4.19.

Table 4.19: Details of energy availability, energy scheduled and energy surrendered as per ARR for FY 2015-16

(MU)

Sr. No.	Name of Thermal Generating Station	Energy availability/ entitlement for purchase (gross)	Energy scheduled (gross)	Energy surrendered (gross)
1	Auraiya (R/F)	4.66	0.00	4.66
2	Dadri Gas (R/F)	5.93	0.00	5.93
3	Auraiya (L/F)	0.00	0.00	0.00
4	Anta (R/F)	1.26	0.00	1.26
5	Anta (L/F)	0.00	0.00	0.00
6	Dadri Gas (L/F)	0.00	0.00	0.00
7	IGSTPS Jhajjar (NTPC JV)	184.32	0.00	184.32
8	NCTPS- 2C (DADRI II)	128.91	0.00	128.91
9	Auraiya (G/F)	156.94	0.00	156.94
10	Farakka (ER)	141.53	0.00	141.53
11	Dadri Gas (G/F)	389.91	0.00	389.91
12	Pragati- III Gas plant (Bawana) (PPCL)	509.83	0.00	509.83
13	Kahalgaon-I (ER)	297.28	0.00	297.28
14	Anta (G/F)	234.53	0.00	234.53
15	Kahalgaon-II (ER)	729.70	0.00	729.70
16	Unchahar-I	257.99	0.00	257.99
17	NPL Rajpura TPS (L&T)	9829.00	1287.48	8541.52
18	Unchahar-III	159.63	63.00	96.63
19	Unchahar-II	489.26	203.00	286.26
20	Goindwal Sahib TPS (GVK)	1798.00	761.00	1037.00
21	Durgapur (DVC)	990.00	607.00	383.00
22	Talwandi Sabo TPS (Sterlite)	8388.00	6502.48	1885.52
23	Rihand- III	434.32	397.00	37.32
24	Rihand-II	767.53	701.00	66.53
25	Rihand-I	802.49	796.48	6.01
26	Mundra (UMPP) (CGPL)	2817.48	2817.48	0.00
27	Singrauli	1621.48	1621.48	0.00
28	Sasan (UMPP) (RPL)	3130.48	3130.48	0.00
Total		**34270.46**	**18887.88**	**15382.58**

PSPCL has further submitted that as per the current estimates being projected in the ARR, there is no deficit for short term power procurement and in case any requirement is assessed, it will be procured on day to day basis. Thus, no separate short term power procurement plan for FY 2015-16 has been prepared.

The quantum of power purchase projected by PSPCL from various plants for FY 2015-16 is given under column III of Table 4.22, which the Commission provisionally approves. The approval of power purchase is subject to approval of PPAs by the Commission.

However, there may be increase in demand/consumption of various categories of consumers than as projected in the ARR on account of various steps taken by PSPCL, as advised by the Commission in the Tariff Order for FY 2014-15. Further, for the purpose of energy/power purchase balance, the Commission has approved sale of extra power available than as determined for energy balance in para 4.6. The actual impact of surrendering of power by PSPCL will be considered at the time of review/true up, for which PSPCL shall make detailed submissions along with reasons thereof, to the satisfaction of the Commission.

4.8.2 **Requirement of Energy through Purchase:** As discussed in para 4.5.2, the energy requirement of 24617 MU (net) has to be met through purchase from Central Generating Stations and other sources. The transmission loss external to PSTCL system has to be added to arrive at the total quantum of energy to be purchased**.**

4.8.3 **Transmission Loss external to PSTCL System:** For net purchase of 26314 MU, PSPCL has shown gross power purchase of 26917.66 MU, after adding external transmission loss of 2.24%.

4.8.4 The Commission has also considered the external loss at 2.24% as considered by PSPCL. The gross energy to be purchased, thus, works out to 25181 MU (24617 MU + external transmission loss of 564 MU).

4.8.5 **Entitlement from Central Generating Stations:** PSPCL meets its demand of power by procurement from Central Generating Stations and other external sources, apart from State's own Generation. Major sources from which PSPCL procures power are Central Generating Stations viz NTPC, NHPC, NPC, SJVNL, THDC, DVC, Co-generation/NRSE Plants, Banking Arrangements, Traders and IPPs. PSPCL has submitted that in order to optimize the cost of power procured, PSPCL has scheduled its power procurement from various Central Generating Stations (CGSs) and other sources on the merit order principles. It has considered the load profile during various seasons, technical constraints and avoidable cost after giving due consideration to contractual obligations, for deciding the procurement/generation schedule. Source of power with the lowest per unit variable cost has been scheduled to be procured first (base load) and those with highest per unit cost at last (peak load). Sources with equal merit order have been considered together in proportion to their available capacity.

The Commission has determined the average of the actual energy purchased by PSPCL during the last three years (FY 2011-12, FY 2012-13 and FY 2013-14) from different NHPC & NPC generating stations under central sector, and compared it with the plant-wise figures projected by PSPCL in the ARR. In case of NTPC generating stations, comparison has been made of the actual energy purchased by PSPCL during FY 2013-14 with plant-wise figures projected by PSPCL in the ARR. The Commission observed that the PSPCL has projected less power purchase than firm allocation from many thermal generating stations of NTPC and other thermal generating stations in the Central & State sector. PSPCL in its ARR for FY 2015-16 has submitted that power has been scheduled on merit order principle and excess power available than the requirement has been proposed to be surrendered. The Commission, as such, approves the power purchase from NTPC, NHPC, NPC and other generating stations in the Central & State sector as projected by PSPCL in the ARR.

Based on above, the details of plant capacity, firm allocation, entitlement of power, power purchase proposed in the ARR by PSPCL and power purchase approved by the Commission from NTPC, NHPC and NPC stations are shown in Table 4.20(A), Table 4.20(B) and Table 4.20(C) respectively.

Table 4.20(A): Power Purchase from Thermal Generating Stations of NTPC for FY 2015-16

Sr. No.	Source	Capacity	Firm allocation to PSPCL		Entitlement of Power projected by PSPCL for FY 2015-16		Power Purchase and share projected by PSPCL for FY 2015-16 (after surrender as per Merit Order)		Power purchase and Share approved by the Commission for FY 2015-16	
		(MW)	(%)	(MW)	(MU)	(%)	(MU)	(%)*	(MU)	(%)#
I	II	III	IV	V	VI	VII	VIII	IX	X	XI
NTPC										
1.	Anta	419	11.69	48.98	235.79	14.67	0.00	13.55	0.00	13.97
2.	Auraiya	663	12.52	83.01	161.60	14.59	0.00	13.81	0.00	14.09
3.	Dadri	830	15.90	131.97	395.84	17.29	0.00	16.77	0.00	16.96
4.	Singrauli	2000	10.00	200.00	1621.18	11.74	1621.48	11.46	1621.48	11.34
5.	Rihand-I	1000	11.00	110.00	802.49	12.73	796.48	12.45	796.48	12.34
6.	Rihand-II	1000	10.20	102.00	767.53	12.09	701.00	11.67	701.00	11.59
7.	Rihand- III	1000	8.27	82.70	434.32	10.36	397.00	9.32	397.00	9.70
8.	Unchahar-I	420	8.57	35.99	257.99	9.24	0.00	9.04	0.00	9.03
9.	Unchahar-II	420	14.28	59.98	489.26	16.37	203.00	15.77	203.00	15.72
10.	Unchahar-III	210	8.10	17.01	159.63	10.16	63.00	9.56	63.00	9.52
11.	Farakka (ER)	1600	1.39	22.24	141.53	1.39	0.00	1.39	0.00	1.39
12.	Kahalgaon-I (ER)	840	6.07	50.99	297.28	6.07	0.00	6.07	0.00	6.07
13.	Kahalgaon-II(ER)	1500	8.02	120.30	729.70	8.02	0.00	8.02	0.00	8.02
14.	NCTPS- 2C (DADRI II)	980	un-allocated Share		128.91	1.94	0.00	0.89	0.00	1.40
15.	IGSTPS Jhajjar (NTPC JV)	1500			184.32	1.51	0.00	0.65	0.00	1.17
16.	**Total (NTPC)**				**6807.37**		**3781.96**		**3781.96**	

*Projected by PSPCL in the ARR.
#Actual for FY 2013-14.

Table 4.20(B): Power Purchase from Hydel Generating Stations of NHPC & NTPC for FY 2015-16

Sr. No.	Source	Capacity	Firm allocation to PSPCL		Power Purchase projected by PSPCL for FY 2015-16		Power purchase approved by the Commission for FY 2015-16	
		(MW)	(%)	(MW)	(MU)	(%)	(MU)	(%)
I	II	III	IV	V	VI	VII	VIII	IX
NHPC								
1.	Bairasuil	180	46.50	83.70	321.86	46.50	321.86	46.50
2.	Salal	690	26.60	183.54	879.96	26.60	879.96	26.60
3.	Tanakpur	94	17.93	16.85	59.62	17.93	59.62	17.93
4.	Chamera-I	540	10.20	55.08	247.26	10.20	247.26	10.20
5.	Chamera-II	300	10.00	30.00	184.70	12.21	184.70	12.21
6.	Chamera-III*	231	7.86	18.15	87.13	9.81	87.13	9.81
7.	Uri	480	13.75	66.00	380.40	13.75	380.40	13.75
8.	Uri – II*	240	8.13	19.51	91.39	8.45	91.39	8.45
9.	Dhauliganga	280	10.00	28.00	83.08	11.86	83.08	11.86
10.	Dulhasti	390	8.28	32.29	219.31	10.14	219.31	10.14
11.	SEWA-II	120	8.33	10.00	52.23	10.19	52.23	10.19
12.	Parbati – III*	520	7.90	41.00	180.41	10.67	180.41	10.67
NTPC								
13.	Koldam*	800	13.88	111.04	400.08	13.88	400.08	13.88
14.	**Total**				**3187.43**		**3187.43**	

** Past generation data not available being new stations. Figures taken as projected in the ARR.*

Table 4.20(C): Power Purchase from NPC stations for FY 2015-16

Sr. No.	Source	Capacity	Firm allocation to PSPCL		Power Purchase projected by PSPCL for FY 2015-16		Power purchase & share approved by the Commission for FY 2015-16	
		(MW)	(%)	(MW)	(MU)	%	(MU)	(%)
I	II	III	IV	V	VI	VII	VIII	IX
NPC								
1.	NAPP	440	11.59	51.00	326.07	14.48	326.07	14.48
2.	RAPP B	440	22.73	100.01	807.84	24.61	807.84	24.61
3.	RAPP C	440	10.41	45.80	449.83	15.24	449.83	15.24
4.	**Total**				**1583.74**		**1583.74**	

4.8.6 Cost of Power Purchase

(a) Central Generating Stations (CGSs)

PSPCL in the ARR petition for FY 2015-16 has submitted that since its power procurement plan is based on merit order principle, capacity charges payable on the basis of allocated share and contractual obligations have been considered inspite of the fact that power procurement from various sources has been regulated on the basis of load demand vis-a vis per unit variable cost from the generating sources. PSPCL has further submitted that Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for the period 2014-19 have been notified on 21.02.2014. CERC has not issued Tariff Orders for CGSs for the period 2014-19. However, CERC has issued provisional Tariff Orders for some stations and final Tariff Orders for some other stations for the period from FY 2009-14. As such, the capacity charges for CGSs have been considered as per the available orders issued by CERC for the respective stations. PSPCL has further submitted that as per CERC Tariff Regulations, the generating company or the transmission licensee are allowed to recover the shortfall or refund the excess Annual Fixed Charges on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate of the respective financial year directly without making any application before CERC. Further, Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, shall be trued up by CERC alongwith the tariff petition filed for the next tariff period. Accordingly, revised AFCs as calculated by various central sector generators and charged in their bills for FY 2012-13, FY 2013-14 and FY 2014-15 have been considered. AFCs for FY 2015-16 for various plants have been assumed same by PSPCL as applicable in FY 2014-15.

Thermal Stations of NTPC

Fixed Cost

As per CERC Tariff Regulations for the period 2014-19, fixed cost is payable in proportion to the share allocation of PSPCL in each of the Central Generating Stations and the Commission has accepted this principle.

CERC has issued final tariff orders for the period 2009-14 for all NTPC stations except IGSTPS Jhajjar (a NTPC JV company) and Rihand-III. For IGSTPS Jhajjar and Rihand-III, provisional tariff orders have been issued by CERC for the period 2009-14. The Tariff Orders for the period 2014-19 for all NTPC stations are yet to be issued. As such, the Commission has considered the Annual Fixed Charges (AFC) in case of NTPC stations (Auraiya, Dadri, Rihand-II, Rihand-III, Unchahar-I, Unchahar-II, Unchahar-III, Farakka(ER), Kahalgaon-II, IGSTPS Jhajjar and NCTPS-2C (Dadri-II)) as per AFC notified for FY 2013-14 in the Tariff Orders issued by CERC for the period 2009-14 and in case of NTPC stations (Anta, Singrauli, Rihand-I and Kahalgaon-I) have been considered as per AFC shown in the bills for the month of September, 2014.

Variable Cost

PSPCL has considered variable charges for existing NTPC plants at 5% higher than those in the month of September, 2014, which the Commission provisionally approves.

Hydel Stations of NHPC & NTPC

Fixed Cost

CERC Tariff Regulations for the period 2014-19 provide that fixed cost is payable in proportion to the share allocation of PSPCL in each of the Central Generating Stations and the Commission has accepted this principle. Further, as per CERC Tariff Regulations for the period 2014-19, the capacity charge is payable inclusive of incentive and Free Energy for Home State, and as such capacity charge is to be worked out in proportion to the actual Plant Availability Factor achieved and also after taking into consideration Free Energy for Home State (12% in case of Bairasuil, Salal, Tanakpur, Chamera-I, Chamera-II, Uri, Dhauli Ganga, Dulhasti & Parbati-III and 13% in case of Chamera-III, Sewa-II & Uri-II), as per submissions made by PSPCL in the ARR. The actual Plant Availability Factor achieved by different NHPC stations during FY 2011-12, FY 2012-13 and FY 2013-14 and Normative Plant Availability Factor as per CERC Tariff Regulations is given in Table 4.21.

Table 4.21: Actual Plant Availability Factor and Normative Plant Availability Factor of NHPC stations

Sr. No.	Station	Plant Availability Factor during FY 2011-12	Plant Availability Factor during FY 2012-13	Plant Availability Factor during FY 2013-14	Average Plant Availability Factor	Normative Plant Availability Factor
		%	%	%	%	%
1.	Bairasuil	94.915	98.281	93.349	95.515	90.00
2.	Salal	63.715	65.792	67.615	65.707	60.00
3.	Tanakpur	64.831	64.639	53.913	61.128	55.00
4.	Chamera-I	87.272	97.772	97.392	94.145	90.00
5.	Chamera-II	96.735	96.739	97.448	96.974	90.00
6.	Chamera-III*		94.594	88.644	91.619	85.00
7.	Uri	75.947	80.749	73.005	76.567	70.00
8.	Dhauli Ganga	93.832	93.761	21.064	69.552	90.00
9.	Dulhasti	96.15	85.427	94.078	91.885	90.00
10.	Sewa-II	85.337	81.898	97.184	88.140	85.00
11.	URI-II**			77.709	77.709	55.00
12.	Parbati-III**			53.825	53.825	68.00

** PAF not available for FY 2011-12.*
*** PAF not available for FY 2011-12 and FY 2012-13.*

PSPCL has submitted that final Tariff Orders for the period 2009-14 for all plants, except Chamera-III and Parbati-III, have been issued. For Chamera-III and Parbati-III, provisional tariff orders have been issued by CERC for the period 2009-14. The Tariff Orders for the period 2014-19 for all NHPC stations are yet to be issued. As such, annual fixed cost in the case of NHPC stations (Bairasuil, Salal, Tanakpur, Chamera-I, Chamera-II, Chamera-III, Uri, Uri-II, Dhauliganga, Dulhasti, Sewa-II and Parbati-III) has been considered by the Commission as per AFC notified in the Tariff Orders issued by CERC for the period 2009-14 and also taking into consideration average Plant Availability Factor worked out in Table 4.21 and Free Energy for Home State. PSPCL has not considered any fixed charges for new plant i.e. Koldam of NTPC and has considered only variable charges.

Variable Cost

PSPCL has calculated fixed charges and variable charges for existing NHPC plants as per applicable Annual Fixed Charges for FY 2013-14.

The Commission has considered variable cost for FY 2015-16 as per NHPC bills for September, 2014 for different hydel stations of NHPC.

In case of Koldam of NTPC (new station), PSPCL has assumed the energy charges as 469.88 paise/Unit (447.50 x 1.05). But, PSPCL in the ARR has submitted that it has assumed the rate of energy from Koldam for FY 2014-15 as 394.00 paise/unit. However, the Commission considers and provisionally approves the energy charges as assumed for FY 2014-15 i.e. 394 paise/Unit.

Under the title of ‘other charges’, PSPCL has assumed the water usage charges for NHPC stations as per unit rate of water charges for FY 2013-14, which the Commission provisionally approves.

NPC Stations

PSPCL has considered variable charges for existing NPC stations at 5% higher than those in the month of September 2014, which the Commission provisionally approves.

(b) Long-term Power Purchase from New and Renewable Sources of Energy (NRSE) within the State

Quantum and rate of Long-term power purchase from NRSE are provisionally approved as per PSPCL’s projections in the ARR petition for FY 2015-16.

(c) Power Purchase from other Central Sector Power Plants

(i) Hydel Stations

The energy entitlement and allocation from Nathpa Jhakri (SJVNL), Tehri (THDC) and Koteshwar (THDC) have been taken as projected by PSPCL in the ARR petition for FY 2015-16.

For new hydel station i.e Rampur (SJVNL), energy entitlement has been taken as projected by PSPCL in the ARR petition for FY 2015-16.

For Nathpa Jhakri (SJVNL), Tehri (THDC) and Koteshwar (THDC), generators are raising provisional bills as CERC Tariff Orders for the period 2009-14 and 2014-19 are yet to be issued.

For Nathpa Jhakri (SJVNL), the annual fixed charges and variable charges have been considered as per bill for September, 2014. While determining the fixed charges, the average Plant Availability Factor (105.35%) for FY 2011-12, FY 2012-13 & FY 2013-14 and Normative Plant Availability Factor as per CERC Tariff Regulations, 2014 (90%) and Free Energy for Home State (12%) have been taken into consideration.

For Tehri (THDC), the annual fixed charges and variable charges have been considered as per bill for September, 2014. While determining the fixed charges, the average Plant Availability Factor (84.89%) for FY 2011-12, FY 2012-13 & FY 2013-14 and Normative Plant Availability Factor as per CERC Tariff Regulations, 2014 (77%) and Free Energy for Home State (12%) have been taken into consideration.

Other charges for Nathpa Jhakri (SJVNL) and Tehri are provisionally approved as projected by PSPCL in the ARR Petition for FY 2015-16.

For Koteshwar (THDC), the annual fixed charges and variable charges have been considered as per bill for September, 2014. While determining the fixed charges, the average Plant Availability Factor (77.88%) for FY 2011-12, FY 2012-13 & FY 2013-14 and Normative Plant Availability Factor as per CERC Tariff Regulations, 2014 (67%) and Free Energy for Home State (12%) have been taken into consideration.

For new plant i.e. Rampur HEP (SJVNL), PSPCL has not considered any fixed charges and has considered only variable charges. PSPCL has assumed the energy charges as 394.00 paise/Unit, which the Commission provisionally approves.

(ii) Thermal Stations

PSPCL in its ARR for FY 2015-16 has shown the availability of power from Durgapur (DVC) as 990 MU. PSPCL has further submitted in the ARR that the power from Durgapur (DVC) will be scheduled on merit order principle and has shown the power purchase from this source as 607 MU, which the Commission provisionally approves.

For Durgapur TPS (DVC), PSPCL has considered the annual fixed charges as claimed by the generator in the bill for September, 2014, as the final tariff order for the period 2009-14 and 2014-19 are yet to be issued by CERC. PSPCL has assumed the variable charges to be 5% higher than those actually billed for September, 2014 i.e. 244.65 paise/Unit (233.00 x 1.05). The Commission has provisionally approved the fixed charges and variable charges as proposed by PSPCL.

(d) Power Purchase and Sale under Banking

PSPCL has submitted that under the new accounting procedure implemented from 1st April 2009, only net of import/export of power under banking arrangement is being accounted for, in power purchase. The Commission notes that the PSPCL has projected to import 2184.56 MU (gross) and to export 2185.22 MU (gross) under banking arrangements, during FY 2015-16. The Commission provisionally accepts the net power sale under banking from HPSEB Ltd., UPCL, J&K and Banking through traders, as projected by PSPCL. PSPCL considered the rate/cost under banking as 342.00 paise/unit, which the Commission provisionally approves.

In addition, the Commission also approves the Open Access charges for Banked Energy at ₹61.18 crore for import of 2184.56 MU, as proposed by PSPCL in the ARR.

(e) Power Purchase from Traders and IPPs (Long Term Power)

(i) Hydel Stations

Quantum of power purchase from Mallana-II HEP (PTC) and Tala HEP (PTC), has been provisionally approved as projected by PSPCL in the ARR.

PSPCL has submitted in the ARR that for Mallana-II HEP (PTC), the rate of energy has been taken as 363 paise/kWh as per provisional tariff allowed by PSERC, which comprises of provisional tariff of 358 paise/kWh granted by the Commission in its Order dated 17.01.2013 in petition no. 54 of 2012 and 5 paise/kWh trading margin payable to PTC by PSPCL as per terms of the PSA signed between them on 23.03.2006. Further, the Commission vide its Order dated 27.11.2013 determined the Annual Fixed Cost (AFC) for the project for FY 2012-13 and FY 2013-14. The aforementioned Order of the Commission was appealed before Hon'ble APTEL by both PSPCL and the generator. Hon'ble

APTEL in its common judgment dated 12.11.2014 disposed of the Appeals and directed PSERC to pass consequential order after considering its directions. Accordingly, PSERC passed the consequential order on 04.12.2014 re-determining the AFC for FY 2012-13 and FY 2013-14. However, PSPCL in IA no. 1 & 2 of 2015 filed by EPPL in petition no. 54 of 2012 submitted that it has filed an Appeal before the Hon'ble Supreme Court against the Hon'ble APTEL's judgment dated 12.11.2014. Accordingly, keeping in view pendency of Appeal in Hon'ble Supreme Court, the Commission provisionally approves the rate of energy as 363 paise/kWh as taken by PSPCL for FY 2015-16.

For Tala HEP (PTC), PSPCL has assumed variable charges as per September, 2014 bills, which the Commission provisionally approves.

(ii) Thermal Stations

PSPCL in its ARR for FY 2015-16 has shown the availability of power from Pragati-III Gas Plant Bawana (PPCL), Mundra UMPP (CGPL) and Sasan UMPP (RPL) as 509.83 MU, 2817.46 MU & 3130.48 MU respectively. PSPCL has further submitted in the ARR that the power from Pragati-III Gas Plant Bawana (PPCL) will be scheduled on merit order principle and has projected power purchase from the source as Nil, which the Commission provisionally approves. Further, the Commission provisionally approves the power purchase from Mundra UMPP (CGPL) and Sasan UMPP (RPL) as 2817.46 MU and 3130.48 MU respectively.

Quantum of power purchase from NVVNL Bundled Power (NTPC Thermal Power+Solar Power) has been provisionally approved as projected by PSPCL in the ARR.

For Pragati-III Gas Plant Bawana (PPCL), PSPCL has assumed annual fixed charges as per September, 2014 bill, as the final tariff order for the period 2009-14 and 2014-19 are yet to be issued by CERC, which the Commission provisionally approves. In the ARR, PSPCL has projected the variable charges to be 5% higher than those actually billed in September, 2014 i.e. 323.37 paise/unit (307.97 x 1.05), which the Commission provisionally approves.

For Mundra UMPP (CGPL), PSPCL has projected the fixed charges on pro-rata basis to those calculated for FY 2014-15. PSPCL has assumed the variable charges to be 5% higher than those actually billed in September, 2014 i.e. 152.57 paise/unit (145.30 x 1.05). The Commission provisionally approves the fixed charges & variable charges as projected by PSPCL in the ARR.

For Sasan UMPP (RPL), PSPCL has considered fixed charges as on the basis of PAFY and variable charges as per third year tariff i.e. 114.80 paise/Unit, which the Commission provisionally approves.

For NVVNL Bundled Power (NTPC Thermal Power + Solar Power), PSPCL has projected in the ARR the variable charges to be 5% higher than the rate of power purchase during FY 2014-15 from this source i.e. 517.10 paise/unit. (492.48 x 1.05), which the Commission provisionally approves.

(iii) IPPs within the State

PSPCL in its ARR for FY 2015-16 has projected the availability of power from Talwandi Sabo TPS (TSPL), Rajpura TPS (NPL) and Goindwal Sahib TPS (GVK) as 8388 MU, 9829 MU and 1798 MU respectively based on 65% availability & PLF of 80% for Talwandi Sabo TPS and Goindwal Sahib TPS and for Rajpura TPS as 100% availability & PLF of 85%. PSPCL has further submitted that the power from these plants will be scheduled on merit order principle and the power purchase from Talwandi Sabo TPS, Rajpura TPS and Goindwal Sahib TPS has been projected as 6502.48 MU, 1287.48 MU and 761 MU respectively, which the Commission provisionally approves.

The Hon'ble APTEL in its Order dated 21.08.2013 in I.A. No.226 of 2013 in Appeal No.56 of 2013 & I.A. No.130 of 2013 in Appeal No.84 of 2013 in the matter of Talwandi Sabo Power Ltd. Vs. PSPCL & PSERC and in I.A. No.227 of 2013 in Appeal No.68 of 2013 in the matter of Nabha Power Ltd. and L&T Power Development Ltd. Vs. PSPCL & PSERC held that the Appellants may undertake a transparent competitive bidding process for procurement of imported coal or coal from alternative domestic sources for their projects to meet the expected shortfall in supply from linked sources in order to operate the Power Plants as per the terms and conditions of the PPA for a period of 12 months from the expected commencement of operation of the first unit of the project on coal and further made it clear that this interim order is to enable the Appellants to take advance action for procurement of coal from alternative sources and this will not give any right to the Appellants to raise any charges over and above that admissible to them as per the terms & conditions of the PPA. It was further held by Hon'ble APTEL that the actual procurement of coal from the alternative sources will be subject to the terms and conditions imposed by the State Commission. Subsequently, to seek further orders of PSERC on various issues, Nabha Power Ltd. (NPL) and Talwandi Sabo Power Ltd. (TSPL) filed Petition No.57 of 2013 and Petition No.60 of 2013 respectively. The Commission disposed of the above petitions vide Order dated 11.02.2014 (Petition No.60 of 2013) and Order dated 19.02.2014 (Petition No.57 of 2013). The Commission further held that although under the Act, it is not mandated to approve procurement of material, yet taking a holistic view and considering that the competitive bidding process was overseen by PSPCL and its representatives signed the technical and price bids, it approves the competitive bidding process undertaken by NPL and TSPL for procurement of coal from alternative sources to operate the power plants as per terms and conditions of their respective PPA for a period of 12 months from the expected commencement of operation of Unit-I of the respective projects on coal subject to terms & conditions and modalities for passing through cost of this coal as laid down in the said Orders. Referring that both the Letter of Assurance (LoA) and Fuel Supply Agreement (FSA) provide a window for supply of imported coal, the Commission held that the cost of imported coal / coal procured from alternative sources would be a pass through in terms of the respective LoA / FSA / PPA for these projects. As a measure for smooth operation of the power plants and to avoid unnecessary litigation, the Commission appointed 'Standing Committee on TSPL Project' comprising of Secretary, Power/Govt. of Punjab, CMD/PSPCL and COO/TSPL and 'Standing Committee on NPL Project' comprising of Secretary, Power/Govt. of Punjab, CMD/PSPCL and Chief Executive/NPL to resolve day to day issues and held that the said respective Standing Committee shall also be the final authority to determine the additional cost of coal from alternative sources / imported coal procured by TSPL/NPL to meet the shortages in coal supplied by CIL or its subsidiaries.

NPL has filed petition no. 4 of 2015 on 23.01.2015 praying to allow extension of the directions issued by the Commission in Order dated 19.02.2014 in petition no. 57 of 2013 till final disposal of Appeal No. 68 of 2013 by Hon'ble APTEL. It has been submitted that Hon'ble APTEL in its Order dated 02.12.2014 in I.A. No. 423 of 2014 in Appeal No. 68 of 2013 has allowed that directions in the interim order dated 21.08.2013 passed by it in I.A. No. 227 of 2013 in the said Appeal shall continue till the final disposal of the Appeal. The aforementioned petition is under adjudication in the Commission.

In the ARR petition, PSPCL has calculated the variable cost considering the variable charges as 260.36 paise per unit for Rajpura TPS (NPL) and 222.40 paise per unit for Talwandi Sabo TPS (TSPL) based on the variable charges of September, 2014 / H2(2014-15) escalated by 5%. The fixed cost for the Rajpura

TPS and Talwandi Sabo TPS has been calculated by PSPCL based on the fixed charges as 136.17 paise per unit and 135.43 paise per unit as per Schedule 11 of their respective PPA. For Goindwal Sahib TPS, the power purchase cost has been calculated by PSPCL assuming fixed charges as 164 paise per unit and variable charges as 253 paise per unit.

The Commission provisionally approves the fixed and variable charges/cost as projected by PSPCL for FY 2015-16 subject to revision/true up as per provisions in their respective LoA/PPA/FSA and Orders in the judicial proceedings, in case of Talwandi Sabo TPS and Rajpura TPS. As regards the tariff for Goindwal Sahib TPS, the same shall be trued up in terms of the tariff to be determined by the Commission on filing of petition in this regard by the generator.

(f) Power Purchase and Sale from Traders (Short-Term)

PSPCL has projected power purchase of 26917.66 MU (gross) from Central Generating Stations and other sources. PSPCL has not projected any short-term power purchase in the ARR. PSPCL has rather submitted that it shall have surplus energy available from tied up sources from Central Generating Stations and other sources, during FY 2015-16.

The gross power purchase requirement as worked out under para 4.8.4 is 25181 MU. As such, PSPCL shall have additional surplus power of 1736.66 MU, in comparison to that projected by PSPCL in the ARR.

The Commission, therefore, provisionally approves sale of 1736.66 MU of power at the average variable rate of surrendered power, for power purchase balance purpose only, since fixed/capacity charges have to be paid for the allocated share in any case.

The quantum and rate of sale of power approved by the Commission above is only for the purpose of power purchase and energy balance. **PSPCL need to carefully plan the best course available to deal with the surplus power i.e. whether it should or should not be scheduled or it should be sold in the market, after assessing its day to day requirement. The surrendering of power should be strictly as per merit order dispatch from all the thermal generating stations, including its own thermal generating stations. While considering merit order dispatch from IPPs within the State, PSPCL should consider the variable cost with domestic coal, if sufficient quantity of domestic coal is available with the IPPs for the power to be scheduled. The inter-state transmission losses be also kept in view while surrendering**

power as per merit order dispatch. Further, any sale of surplus power by PSPCL shall be done at the best possible rate. The endeavour of PSPCL should be to reduce the burden of fixed charges on the consumers of the State.

PSPCL has not submitted any requirement of short term power purchase for FY 2015-16 in this ARR and has submitted that in case any requirement of short term power purchase is assessed, it will procure on day to day basis. **The Commission reiterates that PSPCL needs to purchase power in a judicious & economical manner and also resort to Demand Side Management practices to maintain its commercial viability.**

(g) Inter-State Transmission Charges

PSPCL has submitted in the ARR Petition that long term inter-state transmission charges recovered by PGCIL, are being charged as per Point of Connection (PoC) methodology. PSPCL has further submitted that CERC has notified slab rates of transmission charges valid for 3 months and PGCIL charges have been calculated based upon the applicable PoC slab rates of FY 2013-14. Existing and upcoming interstate plants have been considered for working out PGCIL charges. PSPCL has worked out PGCIL charges as ₹810.38 crore for FY 2015-16 based on these rates, which the Commission provisionally approves.

Based on the above, the cost of power purchase for FY 2015-16 has been worked out as ₹11147.06 crore for purchase of 25181 MU as detailed in Table 4.22.

Table 4.22: Power Purchase cost for FY 2015-16

Sr. No.	Source	Power Purchase (After Surrender) (MU)	AFC (₹ crore)	PSPCL share (%)	Rate of VC (paise /unit)	FC (₹ crore)	VC (₹ crore)	Other Charges (₹ crore)	Total (₹ crore) (VII+VIII+ IX)
I	II	III	IV	V	VI	VII	VIII	IX	X
I	**NTPC**								
1	Anta (G/F)	0.00	211.72	13.97	273.63	29.58	0.00		29.58
2	Anta (R/F)	0.00			987.84		0.00		0.00
3	Anta (L/F)	0.00			855.96		0.00		0.00
4	Auraiya (G/F)	0.00	253.18	14.09	332.22	35.67	0.00		35.67
5	Auraiya (R/F)	0.00			1214.12		0.00		0.00
6	Auraiya (L/F)	0.00			1090.22		0.00		0.00
7	Dadri Gas (G/F)	0.00	324.57	16.96	326.03	55.05	0.00		55.05
8	Dadri Gas (R/F)	0.00			1194.38		0.00		0.00
9	Dadri Gas (L/F)	0.00			832.44		0.00		0.00
10	Singrauli	1621.48	743.24	11.34	131.57	84.28	213.34		297.62
11	Rihand-I	796.48	560.64	12.34	168.21	69.18	133.98		203.16
12	Rihand-II	701.00	650.90	11.59	175.35	75.44	122.92		198.36
13	Rihand- III	397.00	908.89	9.70	177.24	88.16	70.36		158.52
14	Unchahar-I	0.00	250.07	9.03	262.61	22.58	0.00		22.58
15	Unchahar-II	203.00	258.60	15.72	255.99	40.65	51.97		92.62
16	Unchahar-III	63.00	198.12	9.52	256.52	18.86	16.16		35.02
17	Farakka (ER)	0.00	941.58	1.39	331.38	13.09	0.00		13.09
18	Kahalgaon-I (ER)	0.00	552.84	6.07	282.14	33.56	0.00		33.56
19	Kahalgaon-II (ER)	0.00	1261.55	8.02	266.39	101.18	0.00		101.18
20	NCTPS- 2C (DADRI II)	0.00	1089.12	1.40	360.99	15.25	0.00		15.25
21	IGSTPS Jhajjar (NTPC JV)	0.00	1625.00	1.17	419.79	19.01	0.00		19.01
22	Koldam HEP	400.08			394.00		157.63		157.63
	Sub Total (NTPC)	**4182.04**				**701.54**	**766.36**		**1467.90**
II	**NHPC**								
23	Bairasiul	321.86	104.79	46.50	77.20	29.38	24.85		54.23
24	Salal	879.96	257.36	26.60	47.90	42.60	42.15	93.28	178.03
25	Tanakpur	59.62	90.76	17.93	115.20	8.75	6.87		15.62
26	Chamera-I	247.26	291.05	10.20	90.00	17.64	22.25		39.89
27	Chamera-II	184.70	357.33	12.21	147.80	26.72	27.30		54.02
28	Chamera-III	87.13	351.62	9.81	219.80	21.36	19.15		40.51
29	Uri	380.40	362.14	13.75	80.50	30.95	30.62	17.12	78.69
30	Dhauli Ganga	83.08	286.70	11.86	145.30	14.93	12.07		27.00
31	Dulhasti	219.31	1020.99	10.14	307.90	60.05	67.53	10.75	138.33
32	Sewa-II	52.23	198.90	10.19	233.90	12.08	12.22	0.94	25.24
33	Uri-II	91.39	338.75	8.45	175.34	23.23	16.02	7.80	47.05
34	Parbati-III	180.41	382.95	10.67	317.60	18.37	57.30		75.67
	Subtotal (NHPC)	**2787.35**				**306.06**	**338.33**	**129.89**	**774.28**
III	**NPC**								
35	NAPP	326.07			261.05		85.12		85.12
36	RAPP-3 &4	807.84			291.80		235.73		235.73
37	RAPP-5 & 6	449.83			360.63		162.22		162.22
	Subtotal (NPC)	**1583.74**					**483.07**		**483.07**

Sr. No.	Source	Power Purchase (After Surrender) (MU)	AFC (₹ crore)	PSPCL share (%)	Rate of VC (paise /unit)	FC (₹ crore)	VC (₹ crore)	Other Charges (₹ crore)	Total (₹ crore) (VII+VIII+ IX)
I	II	III	IV	V	VI	VII	VIII	IX	X
IV	**NRSE Power (Punjab)**								
38	Long-term NRSE Power	1360.35			544.85		741.19		741.19
39	Short-term NRSE Power	0.00							0.00
	Sub total (NRSE Power)	**1360.35**					**741.19**		**741.19**
V	**Other Central Sector**								
(i)	**Hydel Stations**								
40	Naptha Jhakri HEP (SJVNL)	821.94	1652.60	11.36	143.70	124.86	118.11	21.84	264.81
41	Tehri HEP (THDC)	322.76	1116.48	8.93	229.60	62.45	74.11	12.70	149.26
42	Koteswar HEP (THDC)	103.72	393.33	7.59	195.50	19.71	20.28		39.99
43	Rampur HEP (SJVNL)	107.91			394.00		42.52		42.52
(ii)	**Thermal Stations**								
44	Durgapur (DVC)	607.00	1380.55	20.00	244.65	276.11	148.50		424.61
	Sub total (Other Central sector)	**1963.33**				**483.13**	**403.52**	**34.54**	**921.19**
VI	**Net Banking**								
45	Net Banking with HPSEB, UPCL, J&K and through Traders	(-)0.66			342.00		(-)0.23		(-)0.23
46	Open Access charges for Banking							61.18	61.18
	Sub total (Net Banking)	**(-)0.66**					**(-)0.23**	**61.18**	**60.95**
VII	**Traders / IPPs**								
(i)	**Hydel Stations**								
47	Malana - II HEP (PTC)	231.59		100.00	363.00		84.07		84.07
48	Tala - HEP (PTC)	98.25			202.00		19.85		19.85
(ii)	**Thermal Stations**								
49	Pragati- III Gas plant (Bawana) (PPCL)	0.00	1187.39	10.00	323.37	118.74	0.00		118.74
50	Mundra (UMPP) (CGPL)	2817.48			152.57	301.12	429.86		730.98
51	Sasan (UMPP) (RPL)	3130.48			114.80	45.48	359.38		404.86
52	NVVNL Bundled Power (NTPC Thermal Power + Solar power)	212.75			517.10		110.01		110.01
(iii)	**IPPs within the State**								
53	Talwandi Sabo TPS (Sterlite)	6502.48			222.40	1136.00	1446.15		2582.15

Sr. No.	Source	Power Purchase (After Surrender) (MU)	AFC (₹ crore)	PSPCL share (%)	Rate of VC (paise /unit)	FC (₹ crore)	VC (₹ crore)	Other Charges (₹ crore)	Total (₹ crore) (VII+VIII+ IX)
I	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X**
54	NPL Rajpura TPS (L&T)	1287.48			260.36	1338.38	335.21		1673.59
55	Goindwal Sahib TPS (GVK)	761.00			253.00	295.00	192.53		487.53
	Sub total (Traders/IPPs)	**15041.51**				**3234.72**	**2977.06**		**6211.78**
VIII	**Others**								
56	**Surrender of excess power for energy balance**	(-)1736.66			186.38		(-)323.68		(-)323.68
	Sub total	**(-)1736.66**					**(-)323.68**		**(-)323.68**
IX	**Other Charges**								
57	**PGCIL Charges**							**810.38**	**810.38**
	Total	**25181.00**				**4725.45**	**5385.62**	**1035.99**	**11147.06**

4.8.7 Cost of purchase of RE power/RECs for RPO compliance

In the ARR and Tariff Petition for FY 2015-16, PSPCL has proposed ₹741.48 crore for long term purchase of power from renewable energy sources within the State which includes the cost of purchase of RECs. PSPCL further submitted that it will purchase short term power from renewable energy sources as available and RECs during FY 2015-16 for fulfilling the RPO. The Commission has provisionally approved the same in para 4.8.6(b).

The total power purchase amount, as such, has been worked out as ₹11147.06 crore for FY 2015-16 for purchase of 25181 MU during FY 2015-16, which includes the cost of RE power and RECs for RPO compliance, which the Commission provisionally approves. The shortfall in RPO compliance, if any, should be met with through firstly by purchase of power from renewable energy sources outside the State of Punjab and new projects coming up in the State of Punjab or RECs in case of non availability of such power. However, PSPCL is directed to make a judicious choice between the options of procuring power from (i) conventional sources with purchase of RECS, (ii) renewable energy sources at APPC with purchase of RECs, (iii) renewable energy sources at tariff other than APPC, whichever is economical, so as to safeguard consumer interest.

4.9 Fuel Cost Adjustment (FCA)

Any change in the fuel cost from the level approved by the Commission is to be passed on to the consumers as FCA in line with FCA formula specified in Punjab

State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005. According to this stipulation, any change in fuel cost would be passed on to the consumers on quarterly basis as per Punjab State Electricity Regulatory Commission (Conduct of Business) (Second Amendment) Regulations, 2012.

4.10 Employee Cost

4.10.1 In the ARR Petition for FY 2015-16, PSPCL has projected an employee cost of ₹5480.61 crore (net of capitalization of ₹170.00 crore) for FY 2015-16 as detailed in Table 4.23.

Table 4.23: Employee Expenses for FY 2015-16

(₹ crore)

Sr. No.	Particulars	FY 2015-16 (Projections)
I	II	III
	Salary & Allowances	
1.	Basic pay	1136.38
2.	Overtime	10.00
3.	Dearness allowance	1321.52
4.	Fixed medical allowance	25.47
5.	Conveyance allowance	35.00
6.	Other allowances	172.00
7.	Bonus/Generation Incentive	50.00
8.	Medical expenses reimbursement	20.00
9.	**Total**	**2770.36**
	Terminal Benefits	
10.	Earned leave encashment	152.00
11.	Gratuity (including arrear)	262.00
12.	Commutation of pension	0.00
13.	Workman's compensation	0.10
14.	Arrear of pay	0.00
15.	Ex-gratia	
16.	Fringe benefit tax	0.00
17.	Progressive funding of terminal benefits as per FRP	830.50
18.	**Total**	**1244.60**
	Pension Payments	
19.	Basic pension	1272.27
20.	Dearness pension	
21.	Dearness allowance	
22.	Any other expense	126.05
23.	**Total**	**1398.32**
24.	**Total expenses**	**5413.28**
25.	Less: Amount capitalized	170.00
26.	Net amount	5243.28
27.	Add: BBMB share	237.33
28.	**Net Employee Cost**	**5480.61**

4.10.2 In the ARR Petition for FY 2015-16, PSPCL has submitted that it has taken into consideration the following assumptions in projecting the employee cost for FY 2015-16.

(a) PSPCL has considered an escalation of 3% over the revised estimates for FY 2014-15 for projecting basic pay.

(b) The dearness allowance for FY 2015-16 has been estimated at 107% of the projected basic pay for 12 months, additional increase of 6% applicable for 15 months, increase of 6% for 9 months and further addition of 100% on account of new entrants.

4.10.3 The provisions of the amended Regulation 28 (3) of PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, provide for determination of employee cost in two parts.

- *Terminal benefits including BBMB share on actual basis.*
- *Increase in other employee expenses limited to average increase in Wholesale Price Index (WPI).*

4.10.4 PSPCL has projected terminal benefits of ₹2642.92 (1244.60+1398.32) crore and BBMB share of ₹237.33 crore. PSPCL vide letter No.307/308 dated 28.01.2015, has informed that out of ₹126.05 crore shown under sub-head 'any other expenses' under the head 'pension payments', ₹73.73 crore are 'related to terminal benefits/pension payment and the remaining ₹52.32 crore are 'other employee cost. As such, PSPCL's claim of terminal benefits works out to ₹2590.60 (2642.92-52.32) crore. PSPCL's projections of terminal benefits of ₹2590.60 crore include ₹830.50 crore on account of progressive funding of unfunded past terminal liability of pension and gratuity based on the Transfer Scheme issued by Government of Punjab vide notification dated 24.12.2012. The issue was discussed in the para 6.9.4 of Tariff Order for FY 2014-15 of PSPCL as under:

"PSPCL has projected the terminal benefits and BBMB share amounting to ₹2702.07 (1210.00+1269.43+222.64) crore. PSPCL's projections include ₹914.00 crore on account of progressive funding of unfunded past Terminal liability of pension and gratuity based on the Transfer Scheme issued by Government of Punjab vide notification dated 24.12.2012.

The Commission observes that the terminal liability of ₹14346 crore has not been reflected in the Balance Sheet dated 16.04.2010 of erstwhile Punjab State

Electricity Board as well as in the Opening Balance Sheets of the successor entities.

Sub-clause 8A of Clause 6 of Transfer Scheme dated 24.12.2012 provides that liability in respect of Pension, Gratuity and Leave Encashment of the personnel shall be a charge on the tariff which means that these expenses need to be routed through Profit and Loss account from FY 2014-15. However, debiting of such liability in Profit and Loss account is in contravention of Accounting Standard 5.

Para 16 of Accounting Standard 5 provides for debiting prior period expenses in the books. However, the term 'prior period items', as defined in this Standard, refers only to income or expenses which arise in the current period as a result of errors or omissions in the preparation of the financial statements of one or more prior periods. The terminal benefit liability of PSEB cannot be termed as a 'prior period item' as it is not a result of error or omission. Even if such a liability is treated as 'prior period item' the same cannot be charged to current profit or loss as per para 19 of the Accounting Standard 5. As such, charging of prior period Terminal Benefit liability to consumers of State is in contravention of Accounting Standard 5 notified by Ministry of Corporate Affairs, New Delhi.

Moreover, Transfer Scheme cannot override the subordinate legislation i.e. Regulation of the Commission (in the instant case Regulation 33 of PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005) which mandates as under:

> *"33. Unfunded liability of pension and gratuity;*
>
> *'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.'*

The Commission observes that due to aforementioned reasons, the Terminal Benefit liability as on 16.04.2010 cannot be a charge on tariff and passed on to the consumers. As such, the Commission shall only apply its Regulations while determining the Tariff.

Thus no amount is allowed on account of progressive funding of unfunded past liability of pension and gratuity to PSPCL for FY 2014-15.

After excluding an amount of ₹914.00 crore on account of progressive funding of unfunded past liabilities of pension and gratuity to PSPCL for FY 2014-15, net

Terminal benefits including BBMB share works out as ₹1788.07 (2702.07-914.00) crore."

Thus, the Commission determines the claim of Terminal Benefits and BBMB share as per provisions of PSERC Tariff Regulations at ₹1788.07 crore and allows the same for FY 2014-15."

4.10.5 As discussed in para 6.9.4 of Tariff Order of PSPCL for FY 2014-15, the Commission observes that the Terminal Benefit liability as on 16.04.2010 cannot be a charge on tariff and passed on to the consumers. As such, the Commission shall only apply its Regulations while determining the tariff.

4.10.6 Punjab State Power Corporation Limited (PSPCL) challenged the Tariff Order dated 16.07.2012 passed by the Commission for FY 2012-13 before Hon'ble APTEL in Appeal No.174 of 2012, on various grounds. Hon'ble APTEL framed following issues among others:

(i) Whether the State Commission is justified in not allowing the employees cost as claimed by the appellant, in reducing the same by 17.22%?

(ii) Whether the State Commission is justified in applying the Wholesale Price Index (WPI) to increase in the employees cost and dearness allowance?

The Hon'ble APTEL gave the following findings on the above issues in its Judgment dated 11th September, 2014:

"40.1 *The State Commission has, in the impugned order, wrongly effected a reduction of 17.22% in the employees cost of the appellant on the ground that the employees cost of the appellant are high. The approach of the State Commission in reducing the employees cost to the extent of 17.22% on the ground that the employees cost of the appellant is higher and the appellant does not have control over its employees cost is erroneous and arbitrary. Further, the State Commission is not justified in applying the Wholesale Price Index (WPI) to increase in employees cost and dearness allowance. We do not approve this approach of the State Commission. We agree to the findings laid down by this Appellate Tribunal in its judgments dated 02.03.2012 & 18.10.2012 delivered in Appeal No.76 of 2011 and Appeal No.7, 46 & 122 of 2011 respectively. Thus, both the issues i.e. Issue Nos. (i) & (ii) are allowed by us directing the State Commission to re-examine both these issues in the light of our findings recorded earlier in the judgments dated 02.03.2012 and 18.10.2012 in Appeal No.76 of 2011 and Appeal No.7 of 2011 & batch".*

The Commission sought Review of the above Judgment in Review Petition No.6 of 2015 in Appeal No.174 of 2012. The Review was sought on the ground that above findings of the Hon'ble Tribunal was not in terms of the Regulations of the Commission specifying that the increase in employee cost is to be limited to Wholesale Price Index (WPI) (all commodities) in terms of Regulation 28 of Tariff Regulations made by this Commission in exercise of powers conferred on it under the Electricity Act, 2003 (No.36 of 2003) having the force of sub-ordinate legislation. The Hon'ble APTEL has dismissed the Review Petition of the Commission by its Order dated 30.03.2015.

The Hon'ble APTEL has decided as under:

> *"This Appellate Tribunal in its previous judgment also considered the Regulations and the Wholesale Price Index and held that actual costs need to be considered. We after considering the previous judgment and discussion on the said issue at length in our judgment dated 11.09.2014 in the said Appeal No.174 of 2012, after referring to the decision of the State Commission on the Wholesale Price Index, directed that the actual amount spent, subject to prudent check, is to be considered." (Emphasis supplied)*

'Actual amount spent' in the Hon'ble APTEL Judgment can be considered at the time of True-up only. The Commission allowed actual employee cost in the True-up for FY 2011-12 in Tariff Order for FY 2014-15 based on the provisions in PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 as amended from time to time. Due to non-availability of Audited Annual Accounts for FY 2012-13 and FY 2013-14, the True-up exercise for these years could not be carried out. As the information regarding 'actual amount spent' is not available at the time of projections and review, the Commission has no alternative except to determine the employee cost based on the prevalent PSERC Regulations. Further, the Commission is also considering legal course.

The Commission has, therefore, decided to continue determination of the Employees Cost in this Tariff Order as per its Regulations.

4.10.7 As shown in Table 4.23, PSPCL has projected the 'other employee cost' at ₹2652.68 (2770.36-170.00+52.32) crore for FY 2015-16 after excluding terminal benefits and BBMB share amounting to ₹2827.99 crore from the total claim of employee cost of ₹5480.61 crore. As per Regulations, the approved 'other employee cost' for the previous year is to be considered as the base expense while allowing such cost in the succeeding year. Regulation 28(3)(b) provides for increase in other employee expenses limited to an increase in Wholesale Price Index (WPI). The average annual WPI increase for FY 2015-16 would only be available next year. Accordingly, based on the WPI indices available for 8 months (April 2014 to November 2014), the Commission has calculated the average WPI increase of 3.20% which is adopted for purposes of calculation of allowable employee cost for FY 2015-16. The approved 'other employee cost' in the Review for FY 2014-15 as per para 3.10.7 of this Order is ₹2464.52 crore. After applying the WPI increase of 3.20%, the 'other employee cost' works out ₹2543.38 crore for FY 2015-16. **Accordingly, the Commission approves 'Other Employee Cost' of ₹2543.38 crore for PSPCL for FY 2015-16.**

4.10.8 After excluding an amount of ₹830.50 crore on account of progressive funding of unfunded past liability of pension and gratuity to PSPCL for FY 2015-16, net terminal benefits works out as ₹1760.10 (2590.60-830.50) crore. Besides, as mentioned above, PSPCL has claimed ₹237.33 crore as BBMB share for FY 2015-16. As per provisions in the Tariff Regulations, Terminal benefits and BBMB share of expenditure is allowable on actual basis. However, the actual figures will be available at the time of true up for FY 2015-16.

Therefore, the Commission approves ₹1997.43 (1760.10+237.33) crore on account of terminal benefit and BBMB share of PSPCL for FY 2015-16.

The Commission approves the total employee cost of ₹4540.81 (1997.43+2543.38) crore for FY 2015-16 against the claim of ₹5480.61 crore.

4.11 Repair and Maintenance (R&M) Expenses

4.11.1 In the ARR Petition for FY 2015-16, PSPCL has projected the R&M expenses at ₹628.92 crore, which includes R&M of ₹16.52 crore for asset addition during the year for FY 2015-16.

4.11.2 The Commission has been approving the R&M expenses in accordance with the provisions of Regulation 28 (2)(b) of PSERC Tariff Regulations by adjusting the base R&M expenses in proportion to the increase in WPI. The base R&M expenses of ₹427.60 crore (417.16 crore as the R&M expenses worked out in para 3.11.6 of this Tariff Order for FY 2014-15 and ₹10.44 crore as additional R&M expenses for six months of assets added during the year FY 2014-15) have been considered for FY 2015-16. After applying WPI increase of 3.20 % as discussed in para 4.10.7 of this Tariff Order, allowable R&M expenses for FY 2015-16 work out to ₹441.28 crore.

4.11.3 PSPCL has claimed R&M expenses of ₹16.52 crore for likely asset addition of

₹2422.41 crore during FY 2015-16 in terms of Regulation 28(6) of PSERC Tariff Regulations. As regards this claim of ₹16.52 crore on proposed addition of assets in terms of the PSERC Tariff Regulations, the Commission is of the view that the increase in R&M expenses demanded on this account cannot be allowed at this stage and will be considered at the time of Review next year.

The Commission, accordingly, approves the R&M expenses of ₹441.28 crore for FY 2015-16.

4.12 Administration and General (A&G) expenses

4.12.1 In the ARR Petition for FY 2015-16, PSPCL has projected the A&G expenses at ₹191.69 crore, which include A&G expenses of ₹4.74 crore for asset addition during the year for FY 2015-16.

4.12.2 The Commission has been approving the A&G expenses in accordance with provisions of the amended Regulation 28 (2)(b) of PSERC Tariff Regulations by adjusting the base A&G expenses in proportion to the increase in WPI. The base A&G expenses of ₹129.49 crore (₹126.34 crore as A&G expenses worked out for FY 2014-15 in para 3.12.6 of this Tariff Order and ₹3.15 crore as additional A&G expenses for six month of asset addition during the year FY 2014-15) have been considered for FY 2015-16. Based on the actual increase in WPI (April 2014 to November 2014) of 3.20%, as discussed in para 4.10.7 of this order, the allowable A&G expenses for FY 2015-16 work out to ₹133.63 crore.

4.12.3 PSPCL has claimed A&G expenses to the extent of ₹4.74 crore on the proposed asset addition during FY 2015-16. As regards this claim of ₹4.74 crore on proposed additions of assets in terms of the PSERC Tariff Regulations, the Commission is of the view that the increase in A&G expenses demanded on this account cannot be allowed at this stage and will be considered at the time of Review next year.

4.12.4 PSPCL also submitted that the Annual License fees and amount to be paid as Tariff filing fees for determination of ARR & Tariff Petition should also be allowed as per actual as per clause 2 (b) of the amended Tariff Regulation 28 of PSERC (Terms and Conditions for Determination of Tariff) Second Amendment Regulations, 2012. Regulation 28 (2) (b) provides as under:

> '*Base O&M expenses (except employee cost) as above shall be adjusted according to variation in the average rate (on monthly basis) of Wholesale Price Index (all commodities) over the year to determine the O&M expenses for subsequent years.*

Provided that any expenditure on account of license fees, initial or renewal, fees for determination of tariff and audit fees shall be allowed on actual basis over and above the A&G expenses approved by the Commission.'

4.12.5 As per above regulation, Annual License fees and fees for determination of tariff is also allowable to PSPCL in addition to the A&G expenses as worked out above. The Commission decides that the Annual License fees and fees for determination of tariff of PSPCL be allowed at the previous year's level i.e. ₹11.31 crore as Annual License fees and ARR fees for determination of tariff. However this shall be trued up on receipt of Audited Annual Accounts for FY 2015-16.

Thus, the Commission approves the A&G expenses of ₹144.94 (133.63+11.31) crore for PSPCL for FY 2015-16.

4.13 Depreciation

4.13.1 PSPCL projected depreciation charges of ₹1055.36 crore for FY 2015-16 in the ARR and Tariff petition on assets of ₹44890.65 crore as on April 1, 2015. PSPCL has revised its claim for depreciation charges to ₹1091.43 crore for FY 2015-16 vide letter No.307/308 dated 28.01.2015.

4.13.2 PSPCL has submitted that depreciation expenses for FY 2015-16 have been calculated on the average rate of depreciation, which is applied across the asset classes on the opening balance of assets for the year.

4.13.3 The Commission has approved the depreciation charges of ₹764.42 crore for FY 2014-15 in para 3.13 of this Tariff Order on the assets of ₹23388.58 crore (net of land and land rights) as on 01.04.2014. In absence of Audited Annual Accounts and sub-heads wise details of assets for FY 2014-15, the Commission adopts the addition of GFA of ₹2174.20 crore in FY 2014-15 determined in para 3.14.5 of this Tariff Order for calculating depreciation charges. The Commission decides that no depreciation on assets added during FY 2015-16 is to be considered. Accordingly, the Commission works out the depreciation charges as ₹835.48 crore for FY 2015-16 on the assets of ₹25562.78 crore. However, depreciation on assets added during FY 2015-16 shall be considered during True Up.

4.13.4 PSPCL vide memo no. 11/A&R/A-44 dated 08.01.2015 has intimated that there were capital assets of ₹1113.19 crore created out of Consumer Contribution, Grants and Subsidies as on 31.03.2014. The Commission has approved the consumer contribution at ₹303.83 crore in the Review for FY 2014-15.

Considering the addition of consumer contribution of ₹303.83 crore in FY 2014-15, depreciation of ₹70.85 crore @ 5% on assets created out of Consumer Contribution, Grants and Subsidies of ₹1417.02(1113.19+303.83) crore is reduced from ₹835.48 crore of depreciation charges as worked out in above para for FY 2015-16.

In view of this, the Commission approves Depreciation Charges of ₹764.63 (835.48-70.85) crore for FY 2015-16.

4.14 Interest and Finance Charges

4.14.1 PSPCL has claimed Interest and Finance Charges at ₹2593.14 crore in the ARR Petition for FY 2015-16 (net of capitalization of ₹416.00 crore but inclusive of ₹65.00 crore as finance charges) as detailed in Table 4.24.

Table 4.24: Interest and Finance Charges projected for FY 2015-16

(₹ crore)

Sr. No.	Description	Interest as depicted in ARR Petition
I	**II**	**III**
1.	Interest on Institutional Loans	1222.39
2.	Interest on GoP Loans	5.00
3.	Interest on GPF	149.00
4.	Interest to Consumers	180.00
5.	Sub - total(1+2+3+4)	1556.39
6.	Interest on Working Capital Loan (WCL)	1387.75
7.	Finance Charges	65.00
8.	**Total (5+6+7)**	**3009.14**
9.	Less Capitalization	416.00
10.	**Net Interest and Finance Charges**	**2593.14**

PSPCL has submitted that it has planned significant capital works on various schemes of generation, distribution and transmission functions for which PSPCL has to raise long term loans from various financial institutions to finance these capital works. The interest expenses have been projected on the basis of current outstanding loans and new loans to be taken corresponding to the planned capital expenditure, loan repayment schedule and the interest rate charges to the respective loans. For the new loans considered to fund the investment outlay, PSPCL has considered the average of opening balance and closing balance of loans for calculation of interest expenses.

The Interest and Finance charges allowable to PSPCL are discussed in the ensuing paragraphs.

4.14.2 **Investment Plan**

PSPCL has projected the capital expenditure at ₹3328.00 crore in the ARR and

Tariff Petition for FY 2015-16 as summarized in Table 4.25.

Table 4.25: Summary of Projected Capital Expenditure

(₹ crore)

Sr. No.	Particulars	FY 2015-16 (Projected)
I	**II**	**III**
(a)	Generation Works	1037.00
(b)	Sub-Transmission & associated Projects	515.80
(c)	Distribution Works	1775.20
	Total	**3328.00**

(a) Generation

The proposed expenditure is envisaged for R&M of HEP`s of PSPCL (₹266.00 crore), R&M of BBMB Power Houses (Bhakhra left bank & Dehar) (₹80.00 crore), R&M of other hydel projects (₹60.00 crore), and Mukerian HEP-II (₹35.00 crore), R&M under GNDTP Thermal (₹133.00 crore), R&M under GGSSTP Thermal (₹60.00 crore), GHTP stage-I & II (₹47.00 crore) and other works such as 1320 MW state sector Thermal Project near Mukerian (₹350.00 crore).

(b) Transmission

PSPCL has submitted that capital expenditure of ₹515.80 crore has been planned for network capacity addition, improvement projects for network up to 66 kV, construction of new substations and mini grid sub-stations along with associated transmission lines and associated projects.

(c) Distribution

PSPCL has submitted that distribution function requires regular capital expenditure for network capacity addition and improvement works. The proposed expenditure is mainly envisaged for normal development works including SI schemes (₹410.30 crore), Shifting of Meters out of consumer premises (DSM measures) (₹220.00 crore), release of Tube well connections for general and sem (water logging) affected area (₹132.00 crore), works relating to APDRP-II part-A and B (₹950.00 crore) and for other works ₹62.90 crore.

The Commission has examined the capital expenditure plan projected by PSPCL for FY 2015-16 and observes that PSPCL has envisaged intensive capital expenditure especially for distribution and generation schemes. Keeping in view the actual capital expenditure ₹961.28 crore incurred up to November, 2014 as per capital statements ending 11/2014, the Commission has approved the capital expenditure at ₹2000.00 crore in the Review for FY 2014-15. The proposed capital expenditure for FY 2015-16 is very much higher than the approved capital expenditure for FY 2014-15. The utility has, thus, proposed a highly ambitious capital investment plan for FY 2015-16. The Commission is of the view that it will impose an avoidable burden on the consumers by way of increase in tariff on account of higher projected capital expenditure. The Commission, therefore, keeping in view the level of actual capital expenditure incurred by PSPCL in the previous years and also taking into account the importance of the proposed capital schemes, considers it appropriate to allow capital expenditure of ₹2000.00 crore for FY 2015-16. However, the Commission will reconsider the actual expenditure incurred during FY 2015-16 by PSPCL in the Review of FY 2015-16 in the next Tariff Order.

The Commission, accordingly, approves the capital expenditure at ₹2000.00 crore for FY 2015-16.

PSPCL has proposed to capitalize assets to the extent of ₹2422.41 crore in the ARR Petition for FY 2015-16 against the proposed Investment Plan of ₹3328.00 crore. The Commission has approved Capital expenditure of ₹2000.00 crore under the Investment Plan for FY 2015-16 and the corresponding capitalization in the ratio of sum of opening Capital Works in Progress (CWIP) and estimated capital expenditure by PSPCL works out to ₹1580.21 crore. The Commission considers capitalization of assets of ₹1580.21 crore.

The Commission has approved the consumer contribution at ₹303.83 crore in the Review for FY 2014-15. The Commission takes into consideration, the consumer contribution of ₹303.83 crore at the level approved in the Review for FY 2014-15 towards funding the capital expenditure for FY 2015-16. Accordingly, the loan requirement for the approved investment of ₹2000.00 crore works out to ₹1696.17 (2000.00-303.83) crore for FY 2015-16. This loan requirement is taken into consideration for computation of interest charges.

In the ARR Petition for FY 2015-16, the opening balance of loans (other than WCL and GPF) is taken as ₹9084.18 crore and interest on loan availed by PSPCL is depicted as ₹1222.39 crore. The Commission has approved the closing balance of loans of FY 2014-15(Review)(other than WCL and GPF) of ₹7607.47 crore in para 3.14.6 of this Tariff Order. Considering the opening balance of loans (other than WCL and GPF) of ₹7607.47 crore for FY 2015-16 and the loan requirement of ₹1696.17 crore, the interest on loans (other than WCL) works out to ₹963.49 crore as shown in Table 4.26.

Table 4.26: Interest on Loans (Other than WCL) 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 PSPCL in ARR Petition (other than WCL)	9084.18	3000.00	1067.62	11016.56	1222.39
2.	Approved by the Commission (other than WCL)	7607.47	1696.17	1067.62	8236.02	963.49

The Commission approves the interest on loan at ₹963.49 crore for FY 2015-16.

4.14.3 **Interest on GoP Loans**

In the ARR Petition of 2015-16, PSPCL has claimed ₹5.00 crore as interest on account of GoP loans. On a query from the Commission, PSPCL informed vide memo no. 2928/CC/DTR/Dy.CAO/241/Deficiency Dated 10.12.2013 and No. 225/DTR/Dy.CAO/241/Vol-II dated 30.01.2014 that the Interest of ₹5.00 crore relates to RBI bonds charged by Government as interest and adjusted against subsidy. Thus, there are no GoP loans and consequently no interest liability on account of GoP loans. **Accordingly, claim of interest of ₹5.00 crore is not allowed.**

4.14.4 **Interest on General Provident Fund (GPF)**

PSPCL has claimed interest of ₹149.00 crore on GPF accumulations in its ARR for FY 2015-16.**The Interest of ₹149.00 crore on GPF, being a statutory payment, is allowed.**

4.14.5 **Finance Charges**

PSPCL has claimed finance charges of ₹65.00 crore against loans availed by PSPCL for FY 2015-16. The finance charges of ₹65.00 crore work out to 2.17% of the projected borrowings of ₹3000.00 crore. The Commission has approved loan requirement of ₹1696.17 crore for FY 2015-16. **Accordingly, the Commission approves the finance charges of ₹36.81 crore @2.17% on the loan requirement of ₹1696.17 crore for FY 2015-16.**

4.14.6 **Interest on Consumer Security Deposits**

PSPCL has claimed ₹180.00 crore towards interest on Consumer Security

Deposits in the Projections for FY 2015-16. As per the PSERC (Electricity Supply Code and Related Matters) Regulations 2014, interest is payable to consumers on the security deposits. The consumer security deposit has been considered by the Commission in para 3.14.12 of this Tariff Order, as ₹2320.28 crore as on 31.03.2015. **The Commission, accordingly, allows interest of ₹278.43 crore for FY 2015-16.**

4.14.7 **Capitalization of Interest Charges**

PSPCL has claimed ₹416.00 crore towards capitalization of interest charges. The Commission determines the capitalization of interest at ₹43.04 crore in the ratio of closing balance of works in progress to the total capital expenditure. **The Commission, accordingly, approves capitalization of interest of ₹43.04 crore for FY 2015-16.**

4.14.8 **Interest on Working Capital**

PSPCL has not projected its working capital on the basis of norms as per PSERC Tariff Regulations. Instead, PSPCL has submitted a total working capital loan of ₹11500.00 crore as on 1st April, 2015 with an interest liability of ₹1387.75 crore. The Commission has determined the Working Capital requirement of ₹3829.75 crore as per PSERC Tariff Regulations. By applying an average rate of 11.71 % per annum at the level of previous year, payable by PSPCL to the financial institutions loans, the interest on working capital is worked out as ₹448.46 crore as shown in Table 4.27.

Table 4.27: Interest on Working Capital Requirement for FY 2015-16

(₹ crore)

Sr. No	Particulars	Amount
I	II	III
1.	Fuel Cost for two months	860.04
2.	O & M expenses for one month	427.25
3.	Receivables for two months	4193.41
4.	Maintenance Spares@15% of O&M expenses	769.05
5.	Less Consumer security deposit	2420.00
6.	**Total Working Capital required**	**3829.75**
7.	Interest rate (calculated on weighted average)	11.71%
8.	**Interest on Working Capital Loan**	**448.46**

The Commission, accordingly, approves ₹448.46 crore towards interest on working capital requirement of ₹3829.75 crore for FY 2015-16

Based on the analysis and decisions discussed above, the interest and finance charges are allowed as detailed in Table 4.28.

Table 4.28: Interest and Finance Charges for FY 2015-16

(₹ crore)

Sr. No.	Particulars	Loans as on April 1, 2015	Receipt of loans	Repayment of loans	Loans as on March 31, 2016	Interest approved by Commission
I	II	III	IV	V	VI	VII
1.	Approved by the Commission (other than WCL)	7607.47	1696.17	1067.62	8236.02	963.49
2.	GoP Loans					0.00
3.	Interest on GPF					149.00
4.	**Total (1+2+3)**	7607.47	1696.17	1067.62	8236.02	1112.49
5.	Add: Finance Charges					36.81
6.	Add: Interest on Consumer Security Deposits					278.43
7.	**Gross Interest and Finance Charges (4+5+6)**					**1427.73**
8.	Less capitalization					43.04
9.	**Net interest and Finance Charges (7-8)**					**1384.69**
10.	Add: interest on Working Capital					448.46
11.	**Total (9+10)**					**1833.15**

The Commission, accordingly, approves the interest and finance charges of ₹1833.15 crore for PSPCL for FY 2015-16.

4.15 Royalty charges payable to Govt. of Punjab on power from RSD

In the ARR Petition for FY 2015-16, PSPCL has not claimed any amount as charges payable to GoP for its share of power from RSD being 3% of revenue received by it from sale of power produced by RSD as maintenance charges as well as charges for remaining works of RSD. As such, no amount is allowed on this account.

4.16 Return on Equity

4.16.1 In the ARR Petition for FY 2015-16, PSPCL has claimed RoE of ₹942.62 crore for FY 2015-16 @ 15.5% on the equity base of ₹6081.43 crore.

4.16.2 Erstwhile Punjab State Electricity Board (PSEB) was unbundled vide the Government of Punjab, Notification dated 16.04.2010 in terms of Section 131 of the Electricity Act, 2003 and the provisional transfer scheme for transfer of assets and liabilities etc. to Punjab State Power Corporation Limited (PSPCL) and Punjab State Transmission Corporation Limited (PSTCL) was issued. Since the transfer scheme dated 16.04.2010 was only provisional and the final transfer scheme was yet to be issued by the Government of Punjab, which was to take some time on account of detailed verification of assets etc., this Commission for the purpose of tariff determination continued the tariff determination based upon the capital structure / equity in the hands of PSEB, which was ₹2946.11 crore, out of which equity of PSPCL was ₹2617.61 crore. Subsequently, the Government of Punjab issued the final transfer scheme vide Notification dated 24.12.2012 allocating the opening balances of various assets and liabilities between the two Successor Entities of erstwhile PSEB viz. PSPCL and PSTCL as on 16.04.2010. In the State Government's Notification dated 24.12.2012 amending the Transfer Scheme of 2010, the equity was determined as ₹6687.26 crore in place of ₹2946.11 crore, assigning ₹6081.43 crore to PSPCL and ₹605.08 crore to PSTCL. The Commission accordingly approved the Return on Equity of ₹942.62 crore on the equity amount of ₹6081.43 crore vested with PSPCL in the Review for FY 2012-13 in the Tariff Order of PSPCL for FY 2013-14. The Commission, similarly allowed RoE amounting to ₹942.62 crore on an equity of ₹6081.43 crore for FY 2013-14 in Tariff Order for PSPCL for FY 2013-14. The same amount of RoE was allowed for FYs 2010-11 & 2011-12 (True-ups) and for FY 2014-15 in Tariff Order dated 22.08.2014 of PSPCL for FY 2014-15.

Tariff Order of PSPCL for FY 2013-14 was challenged before the Hon'ble APTEL in Appeal No.142 of 2013 and Appeal No.168 of 2013 by some consumers of PSPCL and RoE approved for FY 2012-13 and allowed for FY 2013-14 was one of the issues raised by the Appellants on the ground that equity has been enhanced to ₹6687.26 crore by unjustifiably treating / including Consumer Contributions amounting to ₹2599.32 crore and Subsidies / Grants for capital assets amounting to ₹1142.02 crore in the equity against the law and the regulations. Hon'ble APTEL decided the issue vide Judgment dated 17.12.2014 and held as under:-

> *"The findings of this Tribunal in Appeal No.46 of 2014 shall squarely apply in this case. Accordingly, this issue is decided in favour of the appellants. The State Commission shall re-determine the RoE as per our directions and excess amount allowed to the distribution licensee with carrying cost shall be adjusted in the next ARR of the respondent No.2."*

PSPCL, the respondent No.2, filed Appeal under Section 125 of the Electricity Act, 2003 before the Hon'ble Supreme Court against the Judgment dated 17.12.2014 of Hon'ble APTEL in Appeal Nos. 142 and 168 both of 2013. Hon'ble Supreme Court vide its Order dated 27.03.2015 has stayed the Judgment dated 17.12.2014. Accordingly, the directions of Hon'ble APTEL in its Judgment dated

17.12.2014 cannot be complied with till order remains stayed or the Appeal is finally disposed of by Hon'ble Supreme Court.

4.16.3 In view of the above and in accordance with the PSERC Tariff Regulations, the Commission decides that the Return on Equity @15.5% per annum be allowed on the equity of ₹6081.43 crore for FY 2014-15.

The Commission, thus, approves ROE of ₹942.62 crore to PSPCL for FY 2015-16, subject to outcome of Appeal pending in Hon'ble Supreme Court of India.

4.17 Transmission Charges payable to PSTCL

The Commission, in Tariff Order dated May 05, 2015, passed on the ARR of PSTCL for FY 2015-16, has determined ₹1074.87 crore (₹1056.48 crore for Transmission business & ₹18.39 crore for SLDC business) as the transmission charges payable to PSTCL by PSPCL. Besides, the Commission has determined net surplus of ₹108.69 crore upto FY 2014-15. After adjusting the surplus of ₹108.69 crore upto FY 2014-15, the ARR of PSTCL for FY 2015-16 has been determined as ₹966.18(1074.86-108.69) crore. The Commission determined carrying cost of ₹1.44 crore payable to PSTCL on the gap as discussed in para 4.14 of PSTCL Tariff Order for FY 2015-16. **Accordingly, an amount of ₹967.62 (966.18+1.44) crore is being included in the ARR of PSPCL for FY 2015-16.**

4.18 Demand Side Management (DSM) Fund

PSPCL has claimed ₹10.00 crore for FY 2015-16 for carrying out DSM programmes. The Commission has already approved in-principle the proposal of PSPCL for replacement of 16 lakhs ICLs with LEDs as Pilot Project under DELP scheme. The Commission directs PSPCL to initiate various other DSM measures to achieve the objectives of DSM Regulations. **Accordingly, the Commission provisionally approves an amount of ₹10.00 crore as claimed by PSPCL for implementation of DSM programme. This amount shall be kept in a separate DSM Fund and used exclusively for DSM programme as per procedure laid down in DSM Regulations.**

4.19 Non Tariff Income

4.19.1 In the ARR Petition for FY 2015-16, PSPCL has projected Non-Tariff income of ₹997.57 crore for FY 2015-16. PSPCL has submitted that it has projected Non-Tariff income by considering an annual year on year escalation of 5% on the Non-Tariff income for the previous year. This growth has been envisaged based on the increase of sales assumed and the historical trend.

4.19.2 In the Petition, PSPCL has prayed that the late payment surcharge may not be treated as part of the Non-Tariff Income as PSPCL's working capital requirements are being determined as per norms and there is no compensation to the PSPCL on account of interest accrued on delayed payments against bills issued and inclusion of the Late Payment Surcharge in Non-Tariff/ Other Income adversely impacts the cash flow position of the PSPCL. The Commission observes that receipts on account of Late Payment Surcharge are to be treated as Non-Tariff Income as per Regulation 34 of PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. Moreover, interest on working capital is allowed to the utility on normative basis notwithstanding that the licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on normative basis. So the plea of the utility not to treat the late payment surcharge as part of the Non-Tariff Income finds no merit.

4.19.3 PSPCL has not taken into account the receipt on account of Late Payment Surcharge in the Non Tariff Income for FY 2015-16. In view of the rationale given in above para, the Commission decides that the receipt on account of Late Payment Surcharge be taken as Non Tariff Income at the previous year's level i.e ₹109.81 crore as intimated by PSPCL in the ARR for FY 2015-16.

4.19.4 PSPCL vide memo no. 395/CC/DTR/Dy. CAO/244 Vol-1 dated 24.03.2005 has revised the Wheeling and Cross subsidy charges from ₹351.08 crore to ₹135.00 crore. However, the Commission considers the revised wheeling and cross subsidy charges for FY 2015-16 as ₹175.00 crore. Accordingly, ₹176.08 (351.08-175.00) crore is reduced from Non-Tariff Income on account of Wheeling and Cross Subsidy surcharge.

Besides, meter rentals etc. of ₹33.00 crore of subsidized categories as projected by PSPCL in the ARR are also to be added to Non Tariff Income for FY 2015-16.

The Commission, therefore, approves the Non-Tariff Income at ₹964.30 (997.57+109.81-176.08+33.00) crore for PSPCL for FY 2015-16.

4.20 Revenue from Existing Tariff for FY 2015-16

In the ARR Petition for FY 2015-16, the revenue from existing tariff proposed by PSPCL for FY 2015-16 is ₹25280.72 crore. However, the Commission expects revenue of ₹25160.48 from the existing tariff on the basis of sales approved by the Commission as shown in Table 4.29.

Table 4.29: Revenue from Existing Tariff for FY 2015-16

Sr. No.	Category of consumers	As Projected by PSPCL			As approved by the Commission		
		Energy sales (MU)	Average billing rate (paise/unit)	Revenue (₹crore)	Energy sales (MU)	Average billing rate (paise/unit)	Revenue (₹ crore)
I	II	III	IV	V	VI	VII	VIII
1	Domestic (Inc. Others)						
	0-100				7154	456.00	3262.22
	101-300				3740	614.00	2296.36
	above 300				1922	656.00	1260.83
	Total	**12516**		**6776.80**	**12816**		**6819.41**
2	Non-Residential Supply						
	Upto 100 Units				1275	657.00	837.68
	Above 100 Units				2278	671.00	1528.53
	Total	**3468**		**2315.09**	**3553**		**2366.21**
3	Small Power	947		554.15	949	585.00	555.17
4	Medium Supply	1991		1270.89	1991	638.00	1270.26
5	Large Supply (including PLEC)	11785		7616.03	12245	646.00	7910.27
6	Public Lighting	203		136.08	201	669.00	134.47
7	Bulk Supply & Grid Supply						
	HT				625	641.00	400.62
	LT				39	668.00	26.05
	Total	**664**		**426.46**	**664**		**426.67**
8	Railway Traction	152		102.39	151	671.00	101.32
9	**Sub-total metered sales within State**						
10	Agriculture	11374		5186.52	10264	456.00	4680.38
11	Common Pool	312		145.70	312		145.70
12	Outside State	54		5.62	54		5.62
13	Add: PLEC, MMC etc.			745.00			745.00
14	**GRAND TOTAL**	**43466**		**25280.72**	**43200**		**25160.48**

4.21 Rebate to consumers catered at higher voltages and Financial impact of ToD tariff

4.21.1 Rebate to consumers catered at higher voltages

The Commission in para 5.2 of the Tariff Order for FY 2013-14 had decided to adopt Cost of Supply Study (Methodology II) and observed in para 4.21 of the Tariff Order for FY 2013-14 that Cost to Serve at higher voltages is lesser than the Cost to Serve at lower voltages.

In the Tariff Order for FY 2014-15, the Commission decided to approve rebate of 30 paise/kVAh to consumers catered at 400/220/132 kV voltage, 25 paise/kVAh at 66/33 kV voltage, 20 paise/kVAh to DS, NRS and MS category consumers catered at 11 kV and 20 paise/kWh to AP/AP High Tech, Compost Plants/Solid Waste Management Plants for Municipalities/ Urban Local Bodies catered at 11 kV. The Commission decides to continue with the high voltage rebates as approved in the Tariff Order for FY 2014-15, during FY 2015-16 also. PSPCL in the ARR for FY 2015-16 has projected the impact on high voltage rebate at the same level as approved by the Commission for FY 2014-15 in the Tariff Order for FY 2014-15 i.e. ₹143.75 crore. **However, the Commission has assessed the impact of this voltage rebate at ₹152.26 crore on the basis of energy sales data supplied by PSPCL for FY 2015-16 in its ARR and approves the same provisionally.** The revenue from tariff on existing rates has accordingly been reduced to this extent. The actual revenue impact will be adjusted at the time of true up. **PSPCL is directed to submit complete details of category-wise energy sales and high voltage rebate, at the time of review/true up of FY 2015-16.**

4.21.2 **Financial impact of ToD tariff**

The Commission in the Tariff Order for FY 2013-14 had approved the proposal of PSPCL for introduction of ToD tariff for 6 months (October to March of the year) during off peak hours from 22.00 hrs to 06.00 hrs for Large Supply industrial category consumers, and approved rebate of ₹1/kWh on the normal tariff for this category. This approval was valid for FY 2013-14. PSPCL had projected a loss of ₹129.00 crore on account of this rebate, which was estimated by PSPCL to be reduced to ₹108.00 crore as a result of increase in demand by 10% during off peak period. Further, PSPCL had proposed to adjust/recover this loss from additional revenue proposed to be generated by increase in Peak Load Exemption Charges (PLEC). The Commission in the Tariff Order for FY 2013-14 approved the increase of 50% in the existing peak load exemption charges.

On persistent demand from Large Supply industrial category consumers for extension in the period of ToD tariff for the whole year, the Commission in its Order dated 28.02.2014 decided to extend the period of ToD tariff to 31.05.2014, after analyzing the issue and observing availability of surplus power with PSPCL during April and May of the year and also declarations of PSPCL and PSTCL that the power available including surplus power can flow through transmission and sub-transmission systems of PSPCL and PSTCL. The Commission in the Tariff Order for FY 2014-15 had assessed the impact of extension in the period of ToD tariff to 31.05.2014 as ₹42.00 crore.

The Commission in para 5.3 of this Tariff Order has approved ToD tariff to Large Supply industrial category consumers and Medium Supply industrial category consumers and has approved a rebate of ₹1/kVAh during off peak hours from 10.00 PM to 06.00 AM (next day), during the period from 01.10.2015 to 31.03.2016, on optional basis. PSPCL in the ARR for FY 2015-16 and its subsequent communication vide letter no. 1229 dated 09.12.2014 has projected the financial impact of ToD rebate @ ₹1.50/kVAh as ₹219.00 crore (129.00+64.50+25.50). This projection has been made with ToD rebate @ ₹1.50/kVAh. However, in its subsequent communication vide letter no. 4816 dated 09.02.2015, PSPCL has projected the financial impact of ToD rebate @ ₹1.50/kVAh from 01.10.2015 to 31.03.2016 as ₹220.30 crore. **Now, since the Commission has approved the ToD rebate @ ₹1.00/kVAh for Large Supply industrial category consumers and Medium Supply industrial category consumers from 10.00 PM to 06.00 AM (next day) for the period from 01.10.2015 to 31.03.2016, the financial impact of this rebate works out to ₹146.87 crore, which the Commission approves provisionally.** The revenue from tariff on existing rates has accordingly been reduced to this extent. The actual impact on revenue will be adjusted at the time of true up. **PSPCL is directed to submit complete details of financial impact of ToD rebate and ToD surcharge and income from PLEC (separately) at the time of true up of FY 2015-16.**

4.22 Carrying Cost on Revenue Gap

4.22.1 The Commission has determined a revenue surplus of ₹231.31 crore during the Review for FY 2014-15. The Commission recovers carrying cost of ₹27.09 crore @11.71% for FY 2014-15 (six months) and for FY 2015-16 (six months).

Thus, the total recoverable carrying cost on the revenue surplus for FY 2014-15 works out to ₹27.09 crore.

4.23 Revenue Requirement for FY 2015-16

4.23.1 A summary of the Aggregate Revenue Requirement of PSPCL for FY 2015-16 as discussed in the preceding paragraphs is given in Table 4.30.

Table 4.30: Revenue Requirement for FY 2015-16

(₹ crore)

Sr. No.	Items of Expenses	Proposed by PSPCL	Approved by Commission
I	**II**	**III**	**IV**
1.	Cost of fuel	5360.10	5160.21
2.	Cost of power purchase	11488.12	11147.06
3.	Employee cost	5480.61	4540.81
4.	R&M expenses	628.92	441.28
5.	A&G expenses	191.69	144.94
6.	Depreciation	1055.36	764.63
7.	Interest charges	2593.14	1833.15
8.	Return on Equity	942.62	942.62
9.	Transmission Charges Payable to PSTCL	931.08	967.62
10.	Charges payable to GoP on power from RSD	0.00	0.00
11.	Provision for DSM fund	10.00	10.00
12.	**Total revenue requirement**	**28681.53**	**25952.32**
13.	Less: Non-Tariff income	997.57	964.30
14.	**Net Revenue Requirement**	**27683.96**	**24988.02**
15.	Revenue from existing tariff	**25280.72**	**25160.48**
16.	Less: Impact of i. Rebate to Consumer catered at higher voltage	143.75	152.26
	ii. ToD tariff	132.00	146.87
	iii. ToD rebate for adjusting PLEC	129.00	
	iv. Revenue due to increased metered sale	461.16	
17.	Net Revenue from existing tariff	**24414.81**	**24861.35**
18.	**Net Gap(+) /Surplus(-) for the year**	**(+) 3269.26**	**(+) 126.67**
19.	Cumulative Gap(+) /Surplus(-) upto FY 2014-15	(+) 6803.85	(-) 53.60
20.	Carrying Cost on Gap(+) /Surplus(-) for FY 2014-15	(+) 1244.68	(-) 27.09
21.	**Gap(+)/Surplus (-)**	**(+) 11317.78**	**(+) 45.98**

The Cumulative Gap for FY 2015-16 is determined at ₹45.98 crore. The Annual Revenue Requirement for FY 2015-16 is assessed at ₹25952.32 crore with energy sales of 43200 MU. The average cost of supply with this revenue requirement comes to 600.75 paise per kWh (₹25952.32 crore/43200 MU). The combined average cost of supply works out to 597.81 paise per kWh (₹25825.65 crore/43200 MU) after taking into account the ARR of ₹25952.32 crore for FY 2015-16, approved consolidated surplus of ₹53.60 crore upto FY 2014-15, carrying cost (recovery) of ₹27.09 crore for the approved revenue gap attributable to PSPCL and uncovered Gap of ₹45.98 crore.

Chapter 5
Tariff Related Issues

5.1 kVAh Tariff and Contract Demand system for DS & NRS categories of consumers having connected load more than 50 kW and upto 100 kW.

5.1.1 The Commission in the Tariff Order for FY 2014-15 approved the introduction of kVAh tariff for Large Supply, Bulk Supply, Railway Traction, Medium Supply, DS (load more than 100 kW) and NRS (load more than 100 kW) categories of consumers and determined the tariff broadly on the basis of conversion factors proposed by PSPCL, as given below:

Sr. No.	Category	Conversion factor
I	II	III
1.	Large Supply (General Industry)	0.95
2.	Large Supply (PIU/Arc Furnace)	0.98
3.	Bulk Supply (HT/LT)	0.95
4.	Railway Traction	0.97
5.	Medium Supply	0.92
6.	DS (load more than 100 kW)	0.92
7.	NRS (load more than 100 kW)	0.92

The Commission also approved the introduction of Contract Demand system for MS category consumers, to facilitate the consumers to have flexibility in the connected load as prevalent in case of other categories of consumers for which contract demand system was existing. The contract demand system was already prevalent in case of Large Supply, Bulk Supply and DS/NRS consumers (with load exceeding 100 kW) before the introduction of contract demand system for Medium Supply category consumers. The consumers of these categories for which contract demand system has been introduced may install the required load, but in case the maximum demand exceeds the sanctioned contract demand, the consumers of these categories are levied a demand surcharge @ ₹750/kVA of demand in excess of the sanctioned contract demand, irrespective of defaults. The tariff for these categories was decided to be single part, with MMC based on contract demand.

The Commission in the Tariff Order for FY 2014-15 had directed PSPCL to submit a roadmap for introduction of contract demand system for all 3 phase DS/NRS/SP industrial consumers. PSPCL in its ARR for FY 2015-16 submitted that it is not possible to introduce the contract demand system for the categories as directed by the Commission, in one step, and requested to postpone the same for one year. Subsequently, in a meeting held with the officers of PSPCL on 16.01.2015, it was submitted by PSPCL officers that it is possible to introduce contract demand system for 3 phase DS/NRS categories of consumers with loads more than 50 kW, as compatible meters in respect of about 95% consumers of these categories exist at present. It was also submitted by PSPCL officers that kVAh tariff for these categories can also be introduced.

5.1.2 A staff paper was prepared and placed on the website and a public notice was issued for inviting objections/comments from the general public and stakeholders on the proposal for introduction of kVAh tariff and Contract Demand System for DS and NRS categories of consumers having connected load more than 50 kW and upto 100 kW. It was brought out in the staff paper that

(i) kVAh based tariff will be a win win situation for both the consumers as well as utilities and its implementation would ensure better quality of power as improved power factor of the system would translate into less voltage excursions beyond the prescribed limits, less system breakdowns, improved life of the instruments of the consumers etc. Further, if a consumer improves/maintains his power factor more than conversion factor fixed for that category of consumers, then his energy consumption will be reduced. For the utility, the prime benefit would be maintenance of high power factor by the consumers of these categories, which in turn would help in improving the system parameters and reduce technical losses, interruptions etc. Further, it would also directly translate into monetary benefit to the utility through reduced cost incurred on installation of HT/LT capacitors at substations/distribution transformers etc. In case, power factor is not maintained at desired levels by the consumers, then licensee would automatically recover higher revenue from the consumers responsible for having lower power factor. In order to arrive at kVAh tariff, following conversion/multiplication factor was proposed to be used, which is normally equal to the derived value of power factor as per the following equation:

Tariff per kVAh = Tariff per kWh x Conversion Factor

Sr. No.	Category	Conversion Factor
1	DS (Load more than 50 kW and upto 100 kW)	0.90
2	NRS (Load more than 50 kW and upto 100 kW	0.90

(ii) It was also proposed in the staff paper to introduce Contract Demand System instead of connected load system for DS and NRS consumers having load more than 50 kW and upto 100 kW, to facilitate the consumers to have flexibility in connected load as prevalent in Large Supply, Medium Supply categories and DS/NRS categories having load more than 100 kW. Further, these consumers may install the required load, but in case the maximum demand exceeds the contract demand, the consumers would be levied a demand surcharge @ ₹750/kVA of demand in excess of sanctioned contract demand, irrespective of number of defaults. The tariff would continue to be single part as here-to-fore and MMC would be based on contract demand. Presently, the load surcharge @ ₹1000/kW or part thereof for each default is being charged, if the connected load of a consumer exceeds the sanctioned load.

(iii) A period of 3 months from the notification was proposed to be given for introduction of kVAh tariff and contract demand system, to enable the consumers of these categories:

(a) to take necessary steps, including installation of capacitors for improving their power factor to have maximum advantage of kVAh tariff;

(b) to declare their contract demand, failing which 100% of the connected load would be taken as contract demand in kVA, by using 0.90 power factor. Within this period of 3 months, Punjab State Power Corporation Limited would install compatible meters against left out consumers of these categories.

5.1.3 Two no. objections, one from PSPCL and the other from Lovely International Trust have been received. The objector-wise issues raised in their objections are as under:

a) The issues raised by PSPCL in its objection are:

(i) Introduction of Contract Demand System

PSERC in the staff paper has proposed to introduce Contract Demand System for DS/NRS categories of consumers having load from 50-100 kW. In this regard, PSPCL has already conveyed its readiness as compatible meters on 95% existing consumers have already been installed. However, compatible meters for the remaining categories may also be installed before the introduction of the Contract Demand System.

(ii) Introduction of kVAh tariff

The introduction of kVAh tariff for these categories would be beneficial to both PSPCL and the consumers, as with the maintenance of high power factor, the system parameters of PSPCL will improve and the billing of the consumers will be reduced on maintaining high power factor than conversion factor. The conversion factor of 0.90 proposed by the Commission for arriving at kVAh tariff has not been found justified to PSPCL. The Commission has already approved the conversion factor of 0.92 for DS/NRS categories of consumers having load more than 100 kW and as such different conversion factor of 0.90 for same categories of consumers should be re-looked by the Commission. The conversion factor of 0.92 has already been approved by the Commission for DS/NRS (above 100 kW) consumers which are connected at HT supply. A lower conversion factor of 0.90 for the same categories of consumers which are provided with separate transformer and connected at LT supply does not seem to be justified. PSPCL in its comments has suggested that conversion factor of 0.92 (same as already approved for DS/NRS with load greater than 100 kW) be used for DS/NRS consumers with load 50-100 kW. PSPCL has further submitted that the concerned officers will be directed for recording kVAh readings of consumers of these categories with effect from 01.04.2015, as the same is not being done at present and accordingly the neutralisation of revenue cannot be worked out.

b) The issues raised by Lovely International Trust in its objection are:

It has been submitted that the definition of electricity unit is in terms of kWh and not in terms of kVAh. There are two components of power i.e. active power (kVAh) and reactive power (kVARh). If only kVAh component is considered for billing purpose, the definition of power consumed is not fulfilled as the component kVARh is left unconsidered. So, introduction of kVAh tariff instead of kWh tariff is not in order and is against the natural justice to the consumers.

The kVAh tariff and Contract Demand System earlier introduced in the Tariff Order for FY 2014-15 for consumers having connected load more than 100 kW was also not in order, because these consumers do not need any flexibility in their installed loads. These consumers by and large have resistive loads, which are conducive to maintain higher power factor in the range of 0.93 and above. Therefore, kVAh tariff will not prove to be helpful for the power system. kVAh tariff was introduced without giving any public notice. On the same analogy, introduction of kVAh tariff for consumers having connected load more than 50 kW and upto 100 kW is unjustified.

It has been further submitted that there will be a tendency of these categories of consumers to reduce their kVAh consumption to reduce their monthly bills by installing shunt capacitors. The ultimate benefit of introduction of kVAh system will go to the manufacturers of shunt capacitors, and it is not in the interest of consumers because they don’t understand the technology involved and the cost of shunt capacitors shall be forced on them. It is the responsibility of the utility to maintain a higher power factor.

5.1.4 The views of the Commission are as under:

(a) On the issues raised by PSPCL

The Commission notes that the introduction of kVAh tariff and Contract Demand System for DS & NRS consumers with load more than 50 kW and upto 100 kW would be beneficial to PSPCL and the consumers, as brought out in the staff paper. The contention of PSPCL that the conversion factor of 0.92 be used instead of proposed 0.90 does not hold good, as presently there is no data to justify the contention of PSPCL. Further, there is no requirement in the General Conditions of Tariff/ Schedules of Tariff for enforcing minimum requirement of power factor by these consumers. As such, the power factor of these consumers may not be as high as those of DS/NRS consumers having load more than 100 kW. Further, there is no mechanism for monitoring the power factor of these consumers. Also, the consumers of these categories are ignorant about the advantages and disadvantages of maintaining better power factor. With the introduction of kVAh tariff, these consumers are supposed to install capacitors to improve their power factor and thus reduce their bills.

(b) On the issues raised by Lovely International Trust

The submissions of the objector are not correct regarding components of power. The total power (kVA) comprises of active power (kW) and reactive power (kVAR). The total power in kVA takes into consideration the active power as well as the power factor of the installation/consumer, whereas kW takes care of only active power. Bringing the power factor nearer to unity will result in reduction in total power and thereby reducing the bills of the consumers. High power factor of the consumers will ensure better quality of power to the consumers in terms of less voltage excursions beyond prescribed limits, less breakdowns of the system, improved life of the apparatus of the consumers. It will also be helpful to the utility in improving the system parameters and reduce technical losses, interruptions etc. The submissions of the objector are totally misplaced. Further, the introduction of contract demand system is definitely advantageous to the consumers as this will give flexibility to them in the installation of additional electricity consuming equipments and at the same time keeping their contract demand within sanctioned limits.

5.1.5 **The Commission, therefore, decides to introduce:**

(i) **kVAh tariff for DS/NRS consumers with load more than 50 kW and upto 100 kW. The kVAh tariff shall be determined broadly on the basis of conversion factor of 0.90. The kVAh tariff shall be applicable with effect from 01.10.2015. PSPCL is advised to continue to record energy consumption in kWh for the purpose of Energy Balance and Energy Audit purpose and for any other purpose for which energy consumption data in kWh is required. PSPCL in its comments vide letter no. 5331/TR-5/PSERC/Reg dated 26.03.2015 has intimated that the concerned officers will be directed for recording kVAh reading of these categories w.e.f. 01.04.2015. The Commission vide its letter no. 62745 dated 30.03.2015 has asked PSPCL to issue instructions to the concerned officers to start recording kVAh readings along with kWh readings and Contract Demand in respect of these categories w.e.f. 01.04.2015.**

(ii) **Contract Demand System in case of DS/NRS consumers with load more than 50 kW and upto 100 kW w.e.f. 01.10.2015. These consumers may install the required load, but in case the maximum demand exceeds the sanctioned contract demand, the consumers will be levied a demand surcharge of ₹750/kVA of demand in excess of sanctioned contract demand, irrespective of number of defaults.**

The tariff will continue to be single part as here-to-fore and MMC will be based on contract demand in kVA.

PSPCL is directed to issue notice to all DS/NRS consumers with load more than 50 kW and upto 100 kW within two months of issue of the Order, for declaring their contract demand within two months of the issue of notice, subject to a maximum of 100 kVA. It may also be mentioned in the notice that if a consumer fails to declare his contract demand within the specified period, his sanctioned load shall be converted into kVA by using 0.90 power factor, subject to a maximum of 100 kVA. If a DS/NRS consumer having load more than 50 kW and upto 100 kW wants to declare his contract demand more than 100 kVA, then in such a case, the consumer has to follow the relevant provisions of the Supply Code. PSPCL is further directed to install compatible meters against all DS/NRS consumers with load more than 50 kW and upto 100 kW before 01.10.2015. However, consumers shall be at liberty to arrange their own compatible meters and get these installed from PSPCL before this date, as per the laid down procedure.

5.2 Two Part Tariff for Retail Supply

5.2.1 (i) Section 45 of the Electricity Act, 2003 provides the power to distribution licensee to recover the charges for the supply of electricity by it in accordance with tariffs fixed from time to time. As per Section 45 (2) of the Electricity Act, 2003 (Act):

The charges for electricity supplied by a distribution licensee shall be:

(a) fixed in accordance with the methods and the principles as may be specified by the concerned State Commission;

(b) published in such manner so as to give adequate publicity for such charges and prices.

Section 45 (3) of the Act states that the charges for electricity supplied by a distribution licensee may include a fixed charge in addition to the charge for the actual electricity supplied.

Moreover, the Tariff Policy, 2006 focuses on introduction of Two Part Tariff and Time of Day (ToD) tariffs as it would result in flattening the peak and implementing various energy conservation measures. Clause 8.4 (1) of Tariff Policy, 2006 defines the tariff components and its applicability as follows:

"Two-part tariffs featuring separate fixed and variable charges and Time differentiated tariff shall be introduced on priority for large consumers (say, consumers with demand exceeding 1 MW) within one year…"

In view of these provisions, the utility (PSPCL) was directed by the Commission to submit the Two Part Tariff proposal for implementation in the State.

(ii) With the ARR & Tariff petition for FY 2012-13, PSPCL had submitted Two Part Tariff proposal to the Commission. The assumptions for arriving at the proposal and the structure were also elaborated therein. Several consumers and consumer groups had raised specific objections to the Two Part Tariff proposal. PSPCL had given its response to the objections raised by the stakeholders. Keeping in view the objections raised by the stakeholders and the response of PSPCL, the Commission in its Tariff Order for FY 2013-14 had observed that "with the coming up of more accurate and sophisticated electronic metering equipment, there is hardly any possibility of manipulation of meter reading data, including maximum demand. However, in view of the complicating/divergent views expressed by various stakeholders, the Commission does not consider it appropriate to introduce Two Part Tariff during the year 2013-14 but would like to more surely prepare the ground for implementation from the next financial year."

The Commission further observed that:

"The Commission, while mindful of Tariff Policy enjoining early introduction of Two Part Tariff, is nevertheless, of the considered view that Two Part Tariff should be introduced only after attending concerns of various stakeholders of the utility through public hearings and by critically analyzing the actual billing data, to determine the impact on consumers as well as revenue of utility. PSPCL is, therefore, directed to examine the issues raised by the consumers/consumer organizations, and conduct mock trial/parallel run of the proposed Two Part Tariff system, at least in five selected Divisions of PSPCL for 6 months, and submit a detailed report along with a more refined proposal for introduction of Two Part Tariff, addressing the concerns of the consumers/consumer organizations expressed during the processing of ARR for FY 2013-14 and also the observations made by PSPCL during the mock trial/parallel run."

(iii) In compliance to the directive of the Commission in the Tariff Order for FY 2013-14, PSPCL submitted Two Part Tariff proposal to the Commission after conducting mock trial/parallel run. In the proposal, PSPCL ensured revenue neutrality with the single part tariff. However, PSPCL reiterated that the Two Part Tariff has characteristics that the low consumption consumers pay more and the consumers having higher consumption pay less, which was also clear from the results of the mock trial obtained. Several consumers/consumer organisations raised objections to the Two Part Tariff proposal. PSPCL gave its response to the objections raised by the consumers/consumer organisations.

In view of the objections from the consumers/consumer associations and the response of PSPCL, the Commission observed and ordered as under, in the Tariff Order for FY 2014-15:

"The Commission notes that there is considerable opposition from various categories of consumers for introduction of Two Part Tariff in the State. The various objectors have submitted their apprehensions and there is general fear in the minds of consumers that their bill amount will increase if the Two Part Tariff proposal submitted by PSPCL is introduced in the present form. PSPCL has tried to allay the apprehensions of the objectors in its reply to the objections raised by the various objectors. During the public hearing also, there was considerable opposition from the various categories of consumers. On examination of the proposal submitted by PSPCL, the Commission has also observed that the proposal will affect the majority of the consumers adversely, particularly the consumers having low consumption. There is a need for consensus building amongst various stakeholders before introduction of Two Part Tariff in the State. The Commission, therefore, directs PSPCL to re-examine the issues/objections raised by the consumers/consumer associations and even should discuss with the various categories of consumers/consumer associations, the issues raised by them, and thereafter resubmit the Two Part Tariff proposal, after addressing the concerns of the majority of the consumers/consumer associations."

5.2.2 In response to the directive of the Commission contained in the Tariff Order for FY 2014-15, PSPCL in the ARR for FY 2015-16 has submitted as under:

"The proposal for Introduction & Implementation of **Two Part Tariff** was submitted to the PSERC vide this office memo no. 1305/CC/DTR-233 dated 1.1.2013. The PSERC in Tariff Order for FY 2013-14 directed the PSPCL to examine the issues raised by the consumers/consumer organizations, and conduct mock trial/parallel run of the proposed Two Part Tariff system, at least in five selected Divisions of PSPCL for 6 months, and submit a detailed report along with a more refined proposal for introduction of Two Part Tariff, addressing the concerns of the consumers/consumers organizations expressed during the processing of ARR for FY 2013-14 and also the observations made by PSPCL during the mock trial/parallel run. As per directions, the proposal for Two Part Tariff and the outcome of the Mock Trial on prescribed proforma was submitted to PSERC vide this office memo no. 226/DTR/Dy.CAO/233/Vol.III dated 30.01.2014 & thereafter, Public Hearing was held on 28.03.2014. Replies of the objections were also sent to PSERC as well as the objectors. In the Tariff Order for FY 2014-15, the Commission has directed PSPCL to resubmit the Two Part Tariff proposal, after addressing the concerns of the majority of consumers/consumer associations.

The perusal of the objections of the stake holders reveal that the stake holders are objecting to the very characteristic of the Two Part Tariff which clearly depicts that the consumers having higher consumption shall have reduced bills under Two Part Tariff whereas the consumers with moderate consumption may have to pay a little extra. There is no tool available with PSPCL which may be applied to ensure that the bill of no consumer increases but the bills of the consumers having higher consumption may reduce as the same shall be contradictory to the principle of revenue neutral proposal.

In view of the above, PSPCL is of a considered opinion that the proposal submitted by PSPCL is the best possible proposal keeping in view the data of PSPCL and since the final call on the introduction of the Two Part Tariff is to be taken by PSERC, the call to build consensus amongst various stake holders also need to be taken by PSERC. Accordingly, the proposal already submitted with the ARR of FY 2014-15 may again be considered for building consensus amongst the stake holders."

The Commission in its letter no. 13376 dated 05.12.2014 reiterated its directions issued in the Tariff Order for FY 2014-15 and directed PSPCL to resubmit the proposal for introduction of Two Part Tariff in the State, after addressing the concerns of the stakeholders as brought in para 7.2 of the Tariff Order for FY 2014-15. PSPCL vide its letter no. 4815 dated 05.02.2015 submitted that PSPCL has already taken its stand on the same as per the reply to the directive in the ARR for FY 2015-16 and the position remains the same as on date.

5.2.3 The Commission is of the view that the Two Part Tariff proposal submitted by PSPCL at the time of processing of ARR for FY 2014-15 cannot be implemented in the present form, in view of apprehensions expressed by various objectors and also fear in the minds of the consumers that their bill amount will increase, if the Two Part Tariff proposal submitted by PSPCL is introduced in the present form. Further, there is, in general, recession in the industrial sector at the national level and specifically more at the State level. As such, time is not ripe to introduce Two Part Tariff proposal submitted by PSPCL. **Therefore, PSPCL is directed to discuss with the various categories of consumers/consumer associations the issues/objections raised by them (as brought out in the Tariff Order for FY 2014-15) and resubmit the Two Part Tariff proposal along with the ARR for FY 2016-17, after building consensus amongst various stakeholders.**

5.3 Time of Day (ToD) Tariff

5.3.1 The Commission in the Tariff Order for FY 2014-15 approved the introduction of ToD tariff for Large Supply industrial category and Medium Supply industrial category consumers. At the time of approval of ToD tariff in the Tariff Order for FY 2014-15, the Commission had opined that with the implementation of the proposal contained in the Staff Paper, the Large Supply and Medium Supply industrial category consumers will shift their operations to off peak hours, resulting in reduction in consumption during peak hours and normal hours and increase in consumption during off peak hours. The Commission had further opined that the consumption during off peak hours may increase further due to cheaper power available during this period and also that PSPCL will be in a position to release more load/connections as a result of shifting of load. All this may also result in increase in the revenue of the utility.

5.3.2 The Commission vide its letter dated 25.02.2015 sought the comments of PSPCL as to whether ToD tariff as approved in the Tariff Order for FY 2014-15 should be continued and if continued what should be the rate of surcharge and rebate. PSPCL was also asked to comment with regard to the period of ToD tariffs. PSPCL vide its letter dated 12.03.2015 has submitted that the proposal of PSPCL on ToD tariff for FY 2014-15 was quite different from the staff paper initiated by the Commission and PSPCL had submitted its objections on the staff paper. PSPCL further submitted that the results of implementation of ToD tariff are the same as anticipated by PSPCL in its objections, and the Commission had taken a conscious decision in the Tariff Order for FY 2014-15 not to go with the PSPCL proposal and objections. PSPCL further submitted that it still holds its view that

ToD tariff should have been as per the original proposal submitted by PSPCL during the Tariff Order of FY 2014-15. PSPCL has reiterated that:

(i) There should be no ToD rebate during the months of April and May as PSPCL has almost flat load curve during this period.

(ii) ToD tariff during night hours should be coupled with surcharge of 0.50 paise/unit during day time as proposed by PSPCL in its original proposal so as to reduce the gain to a particular category of industry.

PSPCL has further submitted that discontinuation of ToD rebate is not recommended as that will give rise to open access scheduling during night hours which may be detrimental to the interest of PSPCL.

From the energy sales data supplied by PSPCL to the Commission, it has been observed as under:

(i) That the energy consumption by Large Supply industrial category consumers has considerably reduced during peak hours, resulting in loss in revenue, which was otherwise being paid by these consumers as peak load exemption charges (PLEC) for supply of electricity during peak hours.

(ii) The consumption of energy during off peak hours has increased marginally and has not increased to the extent expected by the Commission. This means a majority of the Large Supply industrial category consumers have not shifted their operations to off peak hours, even when cheaper power was available during this period.

(iii) The major advantage of ToD tariff has gone to continuous process Large Supply industrial category consumers and the burden of the same will be shared by other categories of consumers.

(iv) Few Medium Supply industrial category consumers have availed the option of ToD tariff.

(v) The decrease in consumption during peak hours and no appreciable increase in consumption during off peak hours has resulted in loss of revenue to PSPCL.

5.3.3 **The Commission, therefore, decides that there shall be no ToD rebate/ToD tariff during the months of April and May, 2015. The Commission further decides to continue ToD tariff from 01.10.2015 to 31.03.2016 on optional basis. However, the Commission disagrees with PSPCL as far as charging of surcharge of 0.50 paise/unit during day time is concerned, but decides to**

reduce the rebate from ₹1.50 /kVAh to ₹1.00/kVAh during off peak hours from 10.00 PM to 06.00 AM.

In view of the above, the Commission approves the Time of Day (ToD) tariff for Large Supply industrial category consumers and Medium Supply industrial category consumers as detailed below:

i) For Large Supply industrial category

(a) The following Tariff is approved for all Large Supply Industrial Category consumers during the period of 01.04.2015 to 30.09.2015:

Period	Time period	Tariff
April, 2015 to September, 2015	06.00 AM to 06.00 PM	Normal Tariff for FY 2015-16*
	06.00 PM to 10.00 PM	Normal Tariff for FY 2015-16* plus PLEC# during peak load hours as approved by the Commission in the Tariff Order for FY 2013-14
	10.00 PM to 06.00 AM	Normal Tariff for FY 2015-16*

* *As per Schedule of Tariff for FY 2015-16.*
\# *Peak Load hours shall not be for more than 3 (three) hours between 6 PM to 10 PM depending upon different seasons.*

(b) The following ToD Tariff is approved for Large Supply Industrial Category consumers, who opt for ToD tariff during the period 01.10.2015 to 31.03.2016:

Period	Time period	Tariff
October, 2015 to March, 2016	06.00 AM to 06.00 PM	Normal Tariff for FY 2015-16*
	06.00 PM to 10.00 PM	Normal Tariff for FY 2015-16* plus ₹3.00 per kVAh
	10.00 PM to 06.00 AM	Normal Tariff for FY 2015-16* minus ₹1.00 per kVAh

* *As per Schedule of Tariff for FY 2015-16.*

(c) The following tariff is approved for Large Supply industrial consumers, who do not opt for ToD tariff during the period 01.10.2015 to 31.03.2016:

Period	Time period	Tariff
October, 2015 to March, 2016	06.00 AM to 06.00 PM	Normal Tariff for FY 2015-16*
	06.00 PM to 10.00 PM	Normal Tariff for FY 2015-16* plus PLEC# during peak load hours as existed prior to FY 2013-14
	10.00 PM to 06.00 AM	Normal Tariff for FY 2015-16*

* *As per Schedule of Tariff for FY 2015-16.*
\# *Peak Load hours shall not be for more than 3 (three) hours between 6 PM to 10 PM depending upon different seasons.*

ii) For Medium Supply industrial category

(a) The following ToD tariff is approved for Medium Supply Industrial Category consumers, who opt for the same:

Period	Time period	Tariff
April, 2015 to September, 2015	06.00 AM to 06.00 PM	Normal Tariff for FY 2015-16*
	06.00 PM to 10.00 PM	
	10.00 PM to 06.00 AM	
Oct., 2015 to March, 2016	06.00 AM to 06.00 PM	Normal Tariff for FY 2015-16*
	06.00 PM to 10.00 PM	Normal Tariff for FY 2015-16*
	10.00 PM to 06.00 AM	Normal Tariff for FY 2015-16* minus ₹1.00 per kVAh

* *As per Schedule of Tariff for FY 2015-16.*

(b) The following tariff is approved for Medium Supply Industrial Category consumers, who do not opt for ToD tariff:

Period	Time period	Tariff
FY 2015-16	06.00 AM to 06.00 PM	Normal Tariff for FY 2015-16*
	06.00 PM to 10.00 PM	
	10.00 PM to 06.00 AM	

* *As per Schedule of Tariff for FY 2015-16.*

iii) The ToD tariffs shall be applicable for the period as indicated in the above tables.

iv) Large Supply and Medium Supply industrial category consumers have to submit fresh option for opting for ToD tariff by 15.09.2015.

v) Large Supply and Medium Supply industrial category consumers opting for ToD tariff have to arrange their own meters capable of recording ToD readings/data as per the above time blocks by 15.09.2015. PSPCL shall ensure its testing and commissioning by 30.09.2015, as the ToD tariffs shall be applicable from 01.10.2015.

vi) Large Supply and Medium Supply Industrial Category Consumers who are unable to give their option and/or arrange their own meters by 15.09.2015, (as per para (iv) and (v) above) may submit their option and arrange their own meter capable of recording ToD readings/data as per above time blocks, after 15.09.2015. The meters of such consumers will be installed by PSPCL within 15 days of receipt of option and meter from the consumer(s). These consumers will be able to avail the ToD Tariff from the billing cycle falling immediately after installation of the energy meter by PSPCL.

vii) PSPCL shall lay down specifications of meters, short list the vendors and fix the rates at which meters shall be available.

viii) PSPCL may install its own meters for ToD consumers and charge meter rentals if the consumer asks for this facility.

5.4 Cost of Supply

5.4.1 In view of the provisions of Electricity Act, 2003 and the National Electricity Policy, the Commission in its various Tariff Orders has been directing PSPCL to expedite the 'Cost of Supply' study and submit its findings to the Commission at the earliest. PSPCL, at the time of processing of ARR and Determination of Tariff petition for FY 2013-14, submitted the cost of supply study report. The cost of supply study report containing detailed explanation on the approach and the methodology developed, results obtained from the two methodologies referred to as Methodology I and Methodology II, was made available for offering comments/suggestions by the stakeholders. The Commission, after considering various comments/suggestions made by the stakeholders and the response of PSPCL, decided to adopt Methodology II for determination of cost of supply to various categories of consumers. Indicative voltage-wise, category-wise cost of supply for the year 2013-14, on the basis of results obtained with Methodology II was made part of the Tariff Order for FY 2013-14.

5.4.2 The Commission observed in the Tariff Order for FY 2013-14 that it would have been ideal to fix electricity tariff for all consumers on cost to serve basis. But, historically, there has been extensive cross subsidization in electricity sector. The tariff for consumers, who pay less than the cost to serve, will need to be hiked significantly to cover the gap between the tariff of subsidized consumers and cost to serve these consumers. Further, the Commission is raising tariff of subsidized consumers gradually to reduce such gap, and at the same time avoiding tariff shock to subsidized consumers and bringing the tariffs of various consumers within reasonable difference as compared to cost to serve these consumers. Keeping this in view and in order to move in the direction of cost of supply, the Commission, in the Tariff Orders for FY 2013-14 and FY 2014-15, decided to give rebate to the various categories of consumers getting supply at 11 kV/33 kV/66 kV/132 kV/220 kV.

5.4.3 **On the basis of data submitted by PSPCL in its Petition for ARR and Determination of Tariff for FY 2015-16 and the ARR approved by the Commission for FY 2015-16, the Commission has determined the indicative voltage-wise, category-wise cost of supply for the year 2015-16, using Methodology II (Appendix II, Volume-I). Further, the Commission decides to give rebate as mentioned in para 7.2.3 [Note (vii) under Table 7.1].**

5.5 Sale of Surplus Power

5.5.1 PSPCL in its ARR for FY 2014-15 had submitted that it shall be having surplus power during FY 2014-15, available from tied up sources i.e. central generating stations and upcoming IPPs in Punjab. In order to maintain energy balance, the surplus power during FY 2014-15 was projected to be surrendered by PSPCL, on merit order of power purchase from these stations. The impact of fixed charges to be borne due to surrender of surplus power was projected as ₹1706 crore. It was also submitted by PSPCL that due to capacity overhang across the country, it may be difficult to sell surplus power outside Punjab. In order to reduce the burden of fixed cost to some extent as a result of surrender of surplus power projected by PSPCL in the ARR for FY 2014-15, the Commission approved rebate of ₹1/kWh (or kVAh) on the category-wise tariffs for all categories, except Street Lighting and AP categories for consumption over and above the threshold limit.

PSPCL in the ARR for FY 2015-16 has projected financial impact on account of rebate due to increased metered sales as ₹271.13 crore during FY 2014-15. PSPCL vide its letter no. 432 dated 01.04.2015 has submitted as under:

(i) As per Tariff Order for FY 2014-15, the energy sales for FY 2013-14 were re-estimated and approved by the Commission. Further, energy sales for FY 2014-15 were also estimated and approved by the Commission. A perusal of these figures reveals that overall growth in energy sales were estimated by PSPCL in the ARR and approved by the Commission in the Tariff Order as 8.01% and 7.76% respectively. Further, para 7.6.2 of Tariff Order for FY 2014-15 reads as under:

"………It is expected that about 3000 MU out of a total surplus power of 12807 MU may be sold if a discount is given on power consumption beyond a threshold…., **the Commission approves rebate of ₹1/kWh (or kVAh) on the category-wise tariff for all categories, except Street Lighting and AP categories**."

So, the Hon'ble Commission expected increase in energy sales by 3000 MU, over and above the estimated growth of 7.76%, with the introduction of rebate of ₹1/unit for increase in consumption beyond a threshold limit.

(ii) From the data of energy sales for FYs 2011-12, 2012-13 and 2014-15 (actual upto February, 2015 and estimated sales for March, 2015 based on March, 2014), PSPCL has worked out %age rise in energy sales during FY 2014-15 to meager 5.17% vis-à-vis energy sales during FY 2013-14, against estimated & approved figures of 8.01% & 7.76%. Further, the %age rise in energy sales of DS category during FY 2014-15 is only 6.75% vis-à-vis energy sales during FY 2013-14, against estimated figure of 12.19% and approved figure of 11.75%. The %age rise in energy sales for NRS category during FY 2014-15 is only 6.37% vis-à-vis energy sales during FY 2013-14, against estimated figure of 12.25% and approved figure of 11.75%. This proves that the overall consumption, especially for DS and NRS categories has not increased as per expectation. The increase in energy sales in case of other categories is just meagre and thus expected increase in energy sales to the extent of 3000 MU has not been achieved.

(iii) The analysis of the data of number of consumers, connected load, units sold and units sold/kW reveals that there has been increase of 6.43% in the connected load during FY 2014-15 vis-à-vis FY 2013-14, against which energy sold has only risen by 5.17%, and thus, the units sold/kW has witnessed a negative trend of 1.19%, showcasing that with the provision of the benefit of rebate, there has not been any positive effect on the consumption.

(iv) For DS & NRS consumers, even when the actual rise in consumption is only 6.75% and 6.37% respectively during FY 2014-15, PSPCL may have to pass benefit of rebate for increase in consumption by 17.04% and 13.31% in compliance with the criteria approved by the Commission in the Tariff Order for FY 2014-15. This suggests that the threshold limit should have been maximum of last 3 years consumption with some normal growth margin (say 8 to 10%) or average of 3 years including current year plus normal growth rather than average consumption of 3 years.

(v) From the above submissions, it can be concluded that the impact of rebate has only proved a financial loss to PSPCL rather than any positive movement towards the objective to increase consumption at a faster rate.

(vi) PSPCL has estimated amount of ₹321 crore as a result of grant of rebate during FY 2014-15, out of which ₹246 crore has been estimated for DS & NRS categories only.

In view of the above submissions, PSPCL has requested that the proposal of rebate should be reconsidered and withdrawn by the Commission for FY 2015-16.

5.5.2 In the ARR for FY 2014-15, PSPCL had projected surplus power of 12807 MU during FY 2014-15 and impact of fixed charges to be borne due to surrender of this surplus power was projected as ₹1706 crore. PSPCL in the ARR for FY 2015-16 has projected surplus power of 6235 MU during second half of FY 2014-15 and 15383 MU during FY 2015-16. The surplus power projected by PSPCL from the central generating stations and IPPs in the State of Punjab has been proposed to be surrendered, as per merit order of power purchase from these thermal and gas plants. PSPCL has not submitted any proposal to utilize/sell this power within the State or outside the State. The financial impact of the power to be surrendered during second half of FY 2014-15 and FY 2015-16 has not been projected by PSPCL in the ARR for FY 2015-16. However, the Commission has worked out the financial impact of surrendered power, on the basis of data supplied by PSPCL in the ARR, as ₹933 crore during second half of FY 2014-15 and ₹2189 crore during FY 2015-16.

In the Tariff Order for FY 2014-15, the Commission, after working out the average per unit cost of the surplus power and with the view to reduce the extra fixed cost of surrendered power to some extent, had approved rebate of ₹1/kWh (or kVAh) on the category-wise tariffs for all categories for consumption over and above threshold limit, except Street Lighting and AP categories. The Commission had expected that about 3000 MU out of a total surplus power of 12807 MU may be sold if a discount/rebate is given on power consumption beyond a threshold limit. The amount of savings as a result of increase in energy sales and thereby reduction in fixed cost of the surrendered power, was not worked out and it was mentioned in the Tariff Order that the savings will only be known at the end of FY 2014-15 and shall be considered by the Commission at the time of true up. PSPCL in the ARR for FY 2015-16 has projected the financial impact of rebate due to increase in energy sales beyond a threshold limit as ₹271.13 crore during FY 2014-15 and ₹461.16 crore during FY 2015-16.

As brought in para 5.5.1, PSPCL in its submissions has stated that the desired purpose of increase in energy sales has not been achieved even with the incentive in the form of rebate of ₹1/kWh (or kVAh) approved by the Commission for increase in energy consumption beyond a threshold limit. Even, the normal increase in energy sales in respect of various categories of consumers during FY

2014-15 is generally less than as estimated by PSPCL/Commission and as such, there may not be any tangible decrease in the fixed cost of the surrendered power during FY 2014-15. The approval of the rebate has resulted in financial implication of around ₹271.13 crore during FY 2014-15 as projected by PSPCL in the ARR for FY 2015-16. The final figures will be known at the time of true up.

In view of the above and the submissions of PSPCL that the impact of rebate provided has only proved a financial loss to PSPCL, rather than any positive movement towards the objective of increase in consumption at a faster rate and that proposal of rebate needs to be reconsidered and withdrawn, the Commission decides not to continue with the rebate as approved in para 7.6 of the Tariff Order for FY 2014-15. PSPCL is directed to pursue vigorously with regard to directive of the Commission in the matter of Review of PPAs with Generators/Traders for purchase of power from outside the State of Punjab (Refer Directive at Sr. No. 6.17). Further, sincere efforts should be made to sell the surplus power at reasonable rates to reduce the burden of fixed charges on the consumers of the State.

Chapter 6
Directives

Compliance of Directives

The Commission has been issuing directives to the distribution licensee so as to achieve higher efficiency & performance level and to provide quality power to the consumers at affordable rates as envisaged in Electricity Act, 2003. The endeavour has been to introduce latest technological advances in the field of power systems to bring transparency and accountability in the working of the sector. The Commission is also duty bound to ensure compliance of various statutory provisions of the Act.

The Commission's directives are an integral part of the Tariff Order which the distribution licensee is obligated to comply with in order to lower its cost of supply to the consumers and improve consumer services. However, it has been observed by the Commission that the compliance of the directives issued to PSPCL in the previous Tariff Orders has not been satisfactory. The status of compliance of directives issued in the Tariff Order for FY 2014-15 and further directives for compliance by PSPCL during FY 2015-16 alongwith comments is summarized as under:

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
6.1	**T&D Loss Reduction**	**(i) Shifting of meters outside consumer premises:** **a) <u>Non APDRP (Rural) Area:</u>** Commission notes with concern the slow progress in shifting of balance meters. More than 1/3rd GSC meters are still to be shifted. Also, Commission's directive to shift 5 lac meters departmentally up to 30th June 2013 has not been complied with. The practice of combining the status report of shifting of meters under Non APDRP (Rural) Area & R-APDRP (Urban) Area is not appreciated. A clear cut scheme-wise detail of meters shifted/ to be shifted under Non-APDRP & R-APDRP areas be submitted quarterly to the Commission. It is also a matter of serious concern that PSPCL delayed the submission of DPRs for Phase II	Total No. Of GSC Meters ending 12/14 =68.67 lac. Meters that have been shifted outside consumer premises into pillar boxes or outside ending 12/14 =48.61 lac. Balance meters (yet to be shifted) ending 12/14 =20.06 lac. Meters tied under Non APDRP Scheme = 8.50 lac. Target for completion 31-3-15 Meters tied under APDRP Scheme =6.83 lac. Target for completion 30.09.2015 Meters to be shifted departmentally =4.73 lac. Target for completion 30.06.2015	In the Tariff Order for FY 2014-15, PSPCL assured that the work of shifting of all remaining meters (14.47 lac) covered under Non-APDRP schemes and awarded on turnkey basis shall be completed by Dec. 2014 and shifting of remaining 2.19 lac meters being carried out departmentally by the PSPCL shall be completed by March 2015. The Commission while expressing concern on the slow pace of shifting of meters, directed PSPCL to complete the job as per this revised schedule submitted by PSPCL. However, it is matter of

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
		and allotted the work of shifting of balance meters under non-APDRP in Oct. 2013 resulting into a delay of 7 months for starting of Phase II after completion of Phase I under which 20.81 lac meters were shifted. Start of Phase II should have been dovetailed with Phase I completion. This has affected the T&D loss reduction programme of PSPCL adversely. Responsibility for this delay need to be fixed by PSPCL and report sent to the Commission within three months of issuance of this Tariff Order. PSPCL must complete the job of shifting the balance meters as per the revised target. The shifting of meters be conducted on priority number one on higher loss feeders and a PERT in this regard be submitted to the Commission along with ARR for 2015-16.		serious concern that 13.23 lac out of a total of 38.10 lac meters under Non-APDRP schemes are yet to be shifted. The target date for completion of the job for shifting 11.84 lac meters under R-APDRP was July 2015 but still 6.83 lac meters (58%) are yet to be shifted. PSPCL from time to time has claimed drastic reduction of losses, improvement in voltage profile and increase in reliability of supply with shifting of meters but still the utility is unable to adhere to its own completion schedules. PSPCL shifted on an average 7.25 lac meters per year during 2010-11 & 2011-12 but during next two years, the progress came down drastically to the level of 2.5 to 3.5 lac meters which may be one of the reason for the failure of PSPCL to achieve T&D loss targets during the last few years. PSPCL is directed to ensure shifting of meters in Non-APDRP areas by the target of 31.03.2015 as committed and submit completion certificate within a month of the issuance of this Tariff Order. The meters covered under R-APDRP schemes should be shifted as per timelines of the approved schemes. PSPCL is also directed to ensure shifting of meters in pillar boxes by revamping the LD system in rural areas as per approved scheme. PSPCL is further directed to submit the report of 3rd party audit as per the Commission's Order dated 28.7.2014 in

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
				petition no.15 of 2014 read with Order dated 25.2.2015 in petition no. 8 of 2015.
		(ii) Replacement of Electro-mechanical (E/M) meters: **a)3-ф meters: SP/DS/NRS** Commission directs PSPCL to ensure replacement of all 3 phase (other than AP) E/M meters as committed by the targeted date of 30.9.2014.	**a) 3-ф meters: SP/DS/NRS** Total requiring replacement **= 2960 no.** Electromechanical meters left are in APDRP Towns and are in scope of contractors. The remaining E/M meters will be replaced by 30-9-15 along with completion schedule of APDRP part-B scheme.	**a) 3-ф meters: SP/DS/NRS** During processing of ARR for FY 2014-15, PSPCL assured that 6699 number 3-ф electro-mechanical meters of SP/DS/NRS categories shall be replaced by 9/2014 but now the target date has again been revised to 9/2015. PSPCL has failed time & again to adhere to the timelines committed by the utility to the Commission. PSPCL is directed to get the job executed on top priority.
		b)1-ф meters (DS/NRS) PSPCL has failed to comply with the directive to replace 50% of remaining E/M meters during 2013-14 despite clear directions that no further extension shall be allowed. PSPCL was to replace the E/M meters along with shifting of meters. The target for shifting of all meters in Non-APDRP areas is Dec 2014 & in R-APDRP area is July 2015. The replacement must be completed within these target dates.	**b) 1-ф meters (DS/NRS)** Total Electromechanical meters =10.20 lac Under Non APDRP area = 6,94,762 Nos. (Due to financial Constraints of PSPCL and Supplier's constraints approximately 3 lac meters will be replaced with electronic meters annually) Under APDRP areas = 3,25,587 Nos. (replacement of electromechanical meters with electronic meters is covered in scope of contractors carrying out shifting of meters outside consumer premises)	**b) 1-ф meters (DS/NRS):** In the Tariff Order for FY 2013-14, PSPCL was directed to replace 50% of remaining E/M meters during 2013-14 and balance during 2014-15 with first priority for high loss feeders. In view of the failure of PSPCL to comply with the directions and various constraints brought out during processing of previous ARR, the Commission directed PSPCL to complete replacement in Non-APDRP areas by Dec. 2014 and in R-APDRP areas by July 2015. However, PSPCL could replace only 86684 electro mechanical meters with electronic meters during first 9 months of FY 2014-15. The work of replacement should have been planned along with shifting of meters but PSPCL could not utilise this opportunity. Commission directs PSPCL to ensure replacement of all E/M meters under R-APDRP areas by July

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
				2015 and in Non-R-APDRP areas by March 2016.
		There are still more than 7600 burnt /defective meters prior to June 2013 which are yet to be replaced. This is a gross violation of Standard of Performance (SoP) approved by the Commission. PSPCL is directed to comply with the time frame mentioned in SoP.	Instructions had been issued to field offices to replace all burnt/Defective meters as per timeframe given in SOP.	**c) Key Exception Report:** As per Key exception report ending 4th cycle of 2014-15, there are 12847 burnt meters pending replacement out of which 1753 number were reported burnt prior to June 2014. Similarly there are 40525 defective meters out of which 5130 meters were reported defective prior to June 2014. This is a serious violation of Standard of Performance and Commission directs PSPCL to ensure adherence to the minimum Standards of Performance mentioned in Annexure-1 of Supply Code 2014.
		(iii) Conversion of LVDS to HVDS: Commission's directive to convert atleast 25% LVDS tubewell consumers into Less LT HVDS per year starting from 2013-14 has not been complied with by the utility. Commission now directs PSPCL to initiate steps to convert atleast 33% LVDS tubewell consumers into Less LT HVDS per year so as to achieve the target by Mar, 2017. None of the 25 kVA & 63kVA transformers depending upon size of the motors be used to feed more than three AP motors and Aerial Bunched Conductor be used to feed these consumers to avoid theft of power.	a) Out of 9.5 lac existing / old AP connections fed on LT, 2.11 lac were covered in 25 schemes against target of shifting of 2.11 lac. connections on HVDS, PSPCL has shifted 221442 AP connections on HVDS by installing 186072 Nos. dedicated DTs b) Conversion of LVDS to HVDS in AP sector is a highly capital intensive scheme. Approximate cost of conversion of 1 tube well connection to HVDS is Rs 1 lac. As such, this scheme is viable only for high loss feeders. PSPCL is identifying feeders where losses are high or theft prone and these shall be covered under this scheme Total AP connections running on HVDS =5.21 lac All new connections are being released under HVDS only All shifting of AP connections is done under HVDS only However PSPCL shall continue with Less LT scheme by providing 25 KVA DT's along with LT line/Cable upto 250 mtrs	The directive in the Tariff Order for FY 2014-15 was to convert atleast 33% LVDS tubewell consumers into Less LT HVDS per year so as to achieve the target by Mar, 2017. During processing of ARR for FY 2013-14, PSPCL proposed that due to technical constraints, the utility shall be implementing Less LT HVDS instead of HVDS but no progress has been reported even under this amended scheme. The plea that PSPCL is identifying high loss feeders is not tenable since this information is readily available with the utility. The adoption of HVDS or less LT HVDS is a universally proven method of loss reduction which needs to be replicated with suitable amendments as per ground realities. PSPCL is directed to submit roadmap

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
				in this regard within 3 months of the issuance of this Tariff Order.
		iv) **Agricultural Feeders Loss Reduction Scheme:** PSPCL's admission that material worth rupees four crore was dismantled while executing 19 no. HVDS schemes prove the benefits of this scheme. The directive for 2013-14 to re-route the AP feeders to attain optimum length of 11 kV & LT lines, sparing electric poles & other material in parallel with conversion of LVDS to less LT HVDS be implemented all over Punjab. The steps taken to deload lines & transformers and replacement/ augmentation of conductor are appreciated. This must continue during 2014-15.	Is being continued as a regular routine.	In future, PSPCL may review the implementation at its own level.
		(**v) Installation of Capacitors:** The Commission notes the compliance. The process should continue proportional to the growth of power network/load.	The compliance of above directive in T.O. FY 2013-14 is already made and is noted down by PSERC. All the new installations are being provided with matching capacitors and therefore capacitors are being procured as per requirement of DS offices for installation. The work of installation of LT shunt capacitor in 15 no. towns is complete. For remaining 25 towns covered under R-APDRP Part-B the work has already been awarded on 10/5/2013 and this work shall be completed within 26 months i.e. by 9/7/2015.	In future, PSPCL may review the implementation at its own level.
		vi) Low Cost Measures **(a) Earthing** : **(i) DTs** Certified Earth Resistance-cum-Earth Leakage current statement should be submitted by PSPCL within two months of issuance of this Tariff Order.	The instructions had been issued to field offices to regularly monitor earth resistance on annual basis and directions are being complied.	In future, PSPCL may review the implementation at its own level.
		ii) Adequacy of existing switchgears & earthmat at all 33/66 kV S/S: The Commission notes the compliance. The process of strengthening the sub- station	PSPCL is regularly monitoring Switchgears & Earthmat at all 33/66 Kv Sub Stations	In future, PSPCL may review the implementation at its own level.

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
		earthing system must be carried out by PSPCL on regular basis.		
		(b) Tightening of loose joints and nuts/bolts The Commission notes the compliance. The exercise must be carried out annually & a certified statement be submitted to the Commission annually by 31st July.	Directions have been issued to field offices to carry out the exercise.	In future, PSPCL may review the implementation at its own level.
		(c) Load balancing at DS transformers: The Commission notes the compliance. The exercise must be carried out annually & a certified statement be submitted to the Commission annually by 31st July.	Directions have been issued to field offices to carry out the exercise after regular intervals.	PSPCL may review the implementation at its own level.
		d) Reduction in Transformer damage rate: The damage rate of small capacity Transformers is on a higher side. PSPCL is directed to deload all overloaded transformers by 31st May, 2015	Small capacity transformers identified overloaded during this paddy will be augmented before onset of next paddy season	There were over 42800 overloaded transformers ending March 2014 but PSPCL has not submitted any status of either overloaded transformers or damage rate during 2014-15. PSPCL is directed to supply the capacity wise number of overloaded transformers and the damage rate during 2014-15 along with roadmap for deloading before start of paddy season within a month of issuance of this Tariff Order.
6.2	**Implement-ation of R-APDRP Scheme:**	**(i) Baseline data** The Commission notes the compliance.	The compliance of above directive in T.O. FY 2013-14 is already made.	—
		(ii) R-APDRP(Part-A) The Commission notes the action being taken and reiterates its directions to PSPCL to implement its IT plan across the State within the time frame fixed by MoP. Commission reiterates its direction that in case of failure to do so, loan amount eligible for conversion into grant shall not be taken in to account by the Commission while processing the ARR.	IT Systems are being deployed in 47 towns eligible under R-APDRP Part A. The remaining areas are to be covered under Non R-APDRP except GIS and AMR of Distribution Transformers. Till date 8 No. towns have been declared “Go Live”. PSPCL has terminated the contract with the ITIA (M/s Spanco) and taken over the activities itself. **Implementation Progress :-** • GIS work has been completed in 24 nos. towns and will be completed in rest of the 23 nos. more towns by 30.06.15 • The billing application has been largely	The Commission directs PSPCL to implement its IT plan across the State within the time frame fixed by MoP. Commission reiterates its direction that in case of failure to do so, loan amount eligible for conversion into grant shall not be taken in to account by the Commission while processing the ARR.

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
			stabilized leading to correct, complete & timely billing. Most of software gaps in MBC (Metering, Billing, Collection) & MDAS (Meter Data Acquisition System) modules have been plugged. Targets: The work is likely to take 6 months more for completion.	
		(iii) R-APDRP (Part-B) PSPCL to implement the scheme within the time frame fixed by MoP. Commission reiterates its direction that in case of failure to do so, loan amount eligible for conversion into grant shall not be taken in to account by the Commission while processing the ARR.	The execution of work awarded on 10.5.13 to M/s L&T Construction and M/s Godrej & Boyce is in progress. 24% work up to 31.12.2014 has been completed by these firms. As per completion schedule the works are to be completed by Oct-2015. However, M/s A2Z has not started the work and their work order is being cancelled and fresh tender is being floated. The placement of work order for another six (6) towns is in progress.	The progress of work under R-APDRP appears to be behind its schedule. The Commission reiterates its stand that R-APDRP schemes be implemented by PSPCL in target time frame work as given by MOP/GOI/(PFC) so that 50% grant under the scheme is fully availed. In case of failure to do so, loan amount eligible for conversion into grant shall not be taken in to account by the Commission while processing the ARR.
		iv) Management Information System (MIS) PSPCL is directed to implement the project in the stipulated time.	Important MIS reports such as Assessment Summary key Exceptions, EDM are being generated. Others are under development. Targets: By 31.03.2015.	In the status report ending March 2014, PSPCL assured that project will be implemented by 31.05.2014 but now the completion date has been revised to 31.03.2015. PSPCL is directed to submit the status within one month of the issuance of this Tariff Order.
6.3	**Energy Audit**	**i) Energy Audit of Distribution System:** The delay in conducting energy audit of 7 towns already integrated with the system has been viewed seriously by the Commission. PSPCL shall furnish by 30.09.2014: a) Energy audit of already integrated 7 towns. b) 11kV feeder wise energy audit reports generated for Non-APDRP areas by updating the consumer indexing.	24 nos. towns have been declared “Go Live” after conducting the required Energy Audit as per PFC guidelines. **Targets:** Rest of 23 no. towns are expected to be declared “Go Live” by 30.06.2015 up to which the timeline for completion of the project has been extended by the MoP/PFC.	Though 24 No. towns have been declared “GO LIVE” by 12/2014 but Energy Audit report of not even a single town has been shared with the Commission by PSPCL despite directions to do so. As such, authenticity/efficacy of the data cannot be commented upon. The Commission directs PSPCL once again to submit

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
				Energy Audit report of all "GO LIVE" Towns within a month of issuance of this Tariff Order. PSPCL has also failed to implement the directive of the Commission to generate & share 11 KV feeder wise Energy Audit Reports by updating consumer indexing. The Commission again directs PSPCL to implement the directions and report compliance within three months of issuance of this Tariff Order
		ii) Energy audit of Thermal Generating Stations: The Commission notes the action being taken. The Energy Audit at PSPCL's thermal plants & other installations be continued as a regular exercise as laid down by BEE.	**GGSSTP Ropar:** GGSSTP is implementing the recommendations of CPRI report in a phased manner, depending upon their technical feasibilities, availability of funds and shut down of the units. **GNDTP, Bathinda** Energy Audit (along with heat rate study) of GNDTP unit-1&2 has already been got conducted from M/s CPRI, Bangalore. Recommendations of the agency are being implemented in a phased manner at the plant. Energy Audit of unit-3&4 was not carried out due to their Renovation & Modernization works. COD (Commercial Operation Declaration) of Unit-3 after its R&M was made w.e.f. 07.12.2012 and the unit is running satisfactorily. The COD of unit-4 has also been made on 27.09.2014 after its R&M works. Further Energy Audit of the units shall be carried out at appropriate time. **GHTP Lehra Mohabbat.** For Energy Audit of all the 4 units, Work Order has been placed upon M/s National Productivity Council Hyderabad.	The Energy Audit at PSPCL's thermal plants & other installations be continued as a regular exercise. Timely action should be taken on the suggestions/recommendations of the Energy Auditors.

<table>
<tr><th>Sr. No.</th><th>Issues</th><th>PSERC Directives for FY 2014-15</th><th>PSPCL reply</th><th>PSERC Comments & Directives for FY 2015-16</th></tr>
<tr><td></td><td></td><td>(iii) Energy Audit of Hydro Generating Stations:
The Commission notes the action being taken. The process needs to continue & monitoring report submitted to the Commission annually.</td><td>The Auxiliary losses of all the Hydro Stations of PSPCL are comparable with NHPC Projects e.g. CERC norms set for Aux. consumption of Chamera HEP are 0.4% of the generated energy. Detail of auxiliary consumption and G.T. Losses in respect of all Hydel Projects of PSPCL ending Dec, 2014 is tabulated below:-
<table>
<tr><th>Sr. No.</th><th>Name of Plant</th><th>Aux.Cons. (%)</th><th>GT Losses (%)</th></tr>
<tr><td>1</td><td>RSD</td><td>0.190</td><td>0.14</td></tr>
<tr><td>2</td><td>ASHP</td><td>0.081</td><td>0.454</td></tr>
<tr><td>3</td><td>UBDC</td><td>0.246</td><td>0.33</td></tr>
<tr><td>4</td><td>MHP</td><td>0.186</td><td>1.46</td></tr>
<tr><td>5</td><td>Shanan</td><td>0.036</td><td>1.28</td></tr>
</table>
Remarks for :
1. Sr. No.4 MHP:-
Power generated in the generating unit is carried out to LV side of generated unit to step up T/F through the 11 KV Aluminum cables (500 mm^2 at PH1&2 and 800 mm^2 at PH 3 & 4) for each phase i.e. total 6 no. Aluminum cable have run load with length of the each cable 105 meter. The losses in these cables are also contributing to GT losses. Further, generator transformers of this plant (PH-1 to PH-4) are very old and were commissioned during 1983, 1988 & 1989.
2. Work for replacement of 132 KV CT/PTs as per State Grid Code is in progress.
3. Sr. No.5 Shanan :-
Due to installation of single phase transformers instead of 3-phase due to space constraints and are about 30 years old, contributing to higher GT losses. These need over hauling for which action is being taken in a phased manner. Two new T/Fs are under procurement which will be energized on receipt thus sparing old T/Fs for their overhaul.</td><td>The Commission notes the compliance. The status of replacement of 1-ф GTs along with energisation of new transformers at Shanan be brought to the notice of Commission.</td></tr>
<tr><td>6.4</td><td>Demand Side Manageme-nt Energy Conservati-on</td><td>i) Bachat Lamp Yojna:
The Commission observes that the replacement of ICLs with CFLs outside BLY has not been explored by PSPCL. The option for replacing ICLs with LED or CFL should be explored by</td><td>Under Bachat Lamp Yojna, total 16,38,059 nos. of CFLs have been distributed in 4,93,999 no. of households and energy saving target of 44.51 MU has been achieved. Moreover PSPCL has already banned the use of ICLs in Govt buildings and at the agriculture connection premises vide circular</td><td>The only step taken by PSPCL during FY 2014-15 is to sign an MoU with BEE for formulation of DSM plan and frame a proposal to provide LEDs to consumers through</td></tr>
</table>

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
		PSPCL and submit the plan within 3 months of issue of this Tariff order.	no. 2/2008. Beside savings from the commercial buildings, about 15 MUs are saved annually at Agriculture Connection Premises by installing CFL. Moreover, after shifting of meters outside the consumers premises energy pumped to the feeders has gone down, thereby meaning that consumer themselves are replacing their ICLs with CFLs. Further consumers are also replacing their inefficient appliances like fans, refrigerator, ACs and other home appliances with star rated efficient appliances. A consumer survey of 3000 no consumers also revealed that after installation of meters outside consumer premises consumers have started using CFLs to reduce their energy bills by them self. As PSPCL has already signed MoU with BEE to make complete formation of DSM Plan for all categories of consumers for the state of Punjab and in this DSM Plan, potential of saving will be determined as per present scenario. Thereafter replacement of ICLs with CFLs/LEDs will be implemented accordingly after approval from PSERC. The process of shifting of meters outside the premises of consumers has achieved the desired objective of DSM and fulfils the saving targets fixed by the PSERC. Other than above mentioned efforts PSPCL framed a proposal to implement the scheme outside BLY by providing LEDs to consumers on subsidized rates through M/s EESL an Energy Services Company (ESCO). Moreover, to fund the total volume of replacement within the PSPCL Organisation, information has been sought from Thermal Plants, Hydro Plants, 66 KV Grid Sub Stations and offices/Buildings regarding ICLs/Florescent Tubes to be replaced with LEDs. Therefore to comply with the directives of PSERC competent authority has approved the following proposal : 1. Replacement of 16 lac. ICLs in the consumers premises with LEDs under DELP Scheme through M/s EECL. 2. Replacement of ICLs/Florescent Tube lights in the Buildings of PSPCL departmentally by PSPCL itself. The above proposal has been submitted to Hon'ble PSERC for its approval and further the same will be implemented accordingly in the State of Punjab.	EESL. The Commission has already approved in-principle the proposal of PSPCL to replace 16 lac ICLs with LEDs under DELP scheme through EESL subject to formal approval of the DPR along with cost-benefit analysis. The Commission directs PSPCL to implement the project on top priority after following the procedure specified in DSM regulations.

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		(ii) Agriculture DSM No tangible action has been taken by PSPCL to take up the pilot project despite repeated directions from the Commission. PSPCL is directed to take immediate action to undertake Agriculture DSM pilot project on top priority on the lines of a pilot project executed by EESL for 600 AP pumps in Hubli where energy saving of 37% has been reported. Based on this pilot project, HESCOM, a distribution company of Karnataka has awarded EESL with work order for over 10000 pumps.	Bids for Ag DSM Pilot Project covering 6 no. feeders of Muktsar and Tarn Taran districts were floated in 2011-12. Despite repeated extensions and modifications no response was received. Further in July 2012 M/s EESL shown interest in the Ag DSM project and M/s EESL submitted their offer to execute the project covering 268 no. of AP pumpsets of Muktsar area with approx. ₹78,43,539 cost to PSPCL. The proposal of M/s EESL was rejected with reason that PSPCL may not draw much savings in the proposed area due to high water level in the area of Muktsar and it cannot form the basis for replication in other parts of the state. After this once again EESL shown interest to implement Pilot Project of Ag DSM Project on ESCO mode and regarding this, a meeting was held with EESL on 18th February, 2014. In this meeting M/s EESL suggested that it require at least 2500 nos. of Agriculture pump sets to be replaced under Ag DSM project in ESCO mode after finalizing the DPR of 40 nos. of Pump Sets. However, the MoP has launched Capacity building programme during the XII Five Year Plan in its meeting dated 18th June, 2013, held at Ministry of Power (MoP), New Delhi. Now PSPCL has signed MoU on 12.06.2014 with BEE under Capacity Building Programme. Under this programme EESL will make complete DSM Action Plan for all categories of consumers of State of Punjab, these categories also include Agriculture pump set consumers. Therefore after the completion of DSM Plan, Potential of savings in agriculture pump sets will be determined and same will be submitted to PSERC and thereafter it will implemented accordingly.	During processing of ARR for FY 2014-15, PSPCL informed that after failure to execute Ag.DSM project on selected 6 number feeders, fresh proposal to execute a pilot project on 2500 number agriculture pumpsets through EESL has been initiated. However, it appears that this proposal has also been shelved by PSPCL. The only step taken by PSPCL during FY 2014-15 is to sign MoU with BEE on 12.06.2014 under Capacity Building Programme. Different studies have established that there is scope of 32% to 37% energy saving in agriculture sector by replacing in-efficient motors with star rated energy efficient motors. Despite repeated directions by the Commission to undertake agriculture DSM pilot projects to demonstrate energy saving potential to the stakeholders, PSPCL has failed to implement the directive. PSPCL is directed to immediately take up some Agriculture DSM pilot projects for replacing in-efficient motors with efficient/star rated motors and submit the action taken report within 3 months of the issuance of this Tariff Order.
		(iii) DSM Plan It is matter of serious concern that PSPCL could not engage even the consultants to prepare DSM plan. PSPCL is directed to achieve energy saving of 500 MU (including back log of 2013-14) during the FY 2014-15.	Specifications for the engagement of consultants for the preparation of complete DSM Plan for the state of Punjab have been prepared by the O/o Dy. CE/ DSM. The specifications have also been approved by the CE/ TA&I. Tender process for the same has been started and M/s MITCON has quoted the lowest bid. M/s MITCON has given a presentation to PSPCL management regarding their modus operandi and survey sample size.	In the Tariff order for FY 2014-15, the Commission approved a DSM fund of ₹40.76 crore as sought by PSPCL but PSPCL has failed to utilise this fund. PSPCL has failed to achieve energy saving target of 500 MU fixed by the Commission.

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			Now M/s MITCON has submitted sample size of 7623 consumers of different categories for survey to prepare DSM plan of Punjab. In the meantime MoP has launched Capacity building programme during the XII[th] five year plan in its meeting dated 18[th] June, 2013, held at Ministry of Power ("MoP"), New Delhi and PSPCL has signed MoU with BEE under this programme. Under this programme BEE will provide full financial as well as technical support to PSPCL for preparation of complete DSM plan notified by PSERC, and BEE will also provide training to master trainers of PSPCL to achieve DSM targets. In this context, as per the terms and conditions of MoU signed between BEE and PSPCL, EESL has empanelled M/s The Energy and Resources Institute (TERI) for study of load research and analysis. To kick start the process for preparation of DSM action plan a meeting was organized on dated 18.09.2014 with the representatives of EESL and TERI wherein TERI offered 1480 No. of consumers as sample size of survey and also PSPCL has provided required data of PSPCL to TERI. Now, as per latest update M/s TERI has already started its survey for different category of consumers in the state of Punjab.	The energy saving target of 500 MU fixed for FY 2014-15 is carried forward to FY 2015-16 and PSPCL is directed to achieve this target. However, the target may be reviewed after submission of load/market survey of consumers being carried by TERI.
6.5	**Agricultural Consumpt-ion & Metering Plan**	**(i)Agricultural Consumption** a) The Commission notes the compliance. b) PSPCL has failed to implement the directive for segregation of Kandi area feeders. It appears that PSPCL lacks the will for metering of AP consumers under AMR-LT capacitor model. The non-compliance is hampering the efforts of the Commission to assess the AP consumption more accurately. The Commission reiterates its directions that AP load of Kandi area feeders fed from mixed feeders should be segregated. In case segregation in some cases is not practicable, then in such cases all AP motors should be metered.	a) All AP mixed feeders have been segregated. b) In Kandi area, it is found difficult to segregate the AP and other loads due to local constraints. Regarding accurate computation of energy consumption of AP load and non AP load, the segregation of AP energy input and non-AP energy input is being done accurately in the ratio of the consumption in each category. All non AP consumers are metered and their consumption is being assessed accurately from the meter readings and AP consumption is being computed from the sample meters and input energy has been segregated according to the ratio of their consumption on the basis of the fact that losses on the feeders are common to both the categories.	a) Compliance is noted b) The Commission repeatedly directed PSPCL to segregate AP load of Kandi area feeders fed from mixed feeders and in case segregation in some cases is not practicable, then in such cases all AP motors should be metered. The Electricity Act 2003 mandate 100% metering of all consumers. However, PSPCL in the last two years had not taken any step to implement the directions of the Commission. Under these circumstances, the Commission has no other option but to continue the present methodology to assess AP consumption of

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
				kandi area feeder. Government of India has now launched Deendayal Upadhyaya Gram Jyoti Yojana which not only allow liberal funding including substantial portion of grant to segregate the mixed feeders and to achieve 100% metering. PSPCL is directed to utilise this scheme for segregation of mixed kandi area feeders and/or achieve 100% metering on these feeders during 2015-16.
		c) AMR of AP feeders It is a matter of serious concern that despite substantial investment & repeated assurances, PSPCL has failed to ensure flow of AMR data of all AP feeders. The feeder count under AMR data remained in the range of 1950-2000 (out of 4200 AP feeders) for more than one year. PSPCL is directed to ensure submission of AMR data of all AP feeders within 3 months of issuance of this Tariff Order.	**c) AMR of AP feeders** AMR compatible meters have been installed on 3250 no. AP feeders under 650 no. sub-stations but the communication hardware (DCU/ Power Supply Unit) in approx. 145 no. sub-stations is faulty and is being replaced in due course of time. Due to non-completion of work and discontinuation of General Packet Radio Service (GPRS) connectivity by AMR vendor w.e.f March 2014, the W.O. placed upon M/s Easun Reyrolle Ltd., Bangalore was terminated by WTD's on 17.06.2014. After termination of the W.O., the project has been taken over by PSPCL IT wing by availing GPRS connectivity from M/s Airtel Ltd. All sub-stations are being synchronized individually after replacing SIM cards in DCU's/ Modems. Data from 350 no. sub-stations with 2000 no. feeders (1200 AP and 800 non-AP) is being received at AMR data center. The submission of AMR data on monthly basis has commenced w.e.f. Dec'2014 and the same will be continued in future also. **<u>Targets :</u>** This project was awarded in 2008 i.e. 7 years back and was based on Modbus protocol feeder meters, whereas now with the change of technology, DLMS protocol meters are being procured by PSPCL and the present AMR software is not capable to read the DLMS meters. Now, PSPCL has started the implementation of SAP which is going on 47 No. towns, the data will be received in the data center and this SAP implementation is being extended to whole of PSPCL which will enable the availability of AMR readings of all feeders. The likely period of SAP	**c) AMR of AP feeders** The AMR project covering 500 grid Sub-stations was allotted in year 2008 and the scope of work was revised to cover 650 grid Sub-stations feeding 3850 AP feeders with completion date of 31.12.2012. Despite repeated directions by the Commission, PSPCL has failed to fully operationalise the project. During processing of ARR for FY 2012-13, it was informed by PSPCL that AMR compatible meters on 3239 AP feeders have been installed and AMR data will be available soon to the Commission for accurate assessment of AP consumption. However, PSPCL could submit correct data of only approximately 2000 AP feeders and that too for short duration. The submission of AMR data has been discontinued w.e.f March 2014. It was informed by PSPCL that due to some technical snag in AMR Server and cancellation of the contract of AMR vender due to deficient service, the data is not being captured by PSPCL.

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
			implementation would be around 1-1/2 to 2 years.	Thus PSPCL due to its inept handling of AMR project has squandered the benefits which could have accrued due to substantial investment made to opertionalise the AMR project. The successful implementation of AMR project could have helped the Commission to estimate AP consumption more accurately to the satisfaction of all the stakeholders since no human interface in collection of the AMR data is involved. It is matter of concern that there appears to be no clear roadmap in the near future for the revival of the AMR project. It appears that PSPCL is planning to bring all feeders under SAP which may take further 2 years. PSPCL is directed to revive the AMR project and ensure submission of AMR data of AP feeders without any further delay.
		d) There is usually delay in submission of monthly pumped energy data. PSPCL must ensure compliance of directive.	d) Monthly data of pumped energy on AP feeders as per Grid meters on the formats up to 12/2014 stands submitted to Hon'ble PSERC.	d) Compliance noted
		e) The AMR Data of AP feeders has been discontinued by PSPCL w.e.f. March 2014. PSPCL is directed to ensure submission of AMR data of about 2300 nos. AP feeders immediately and remaining by 1st December, 2014.	e) The submission of AMR data on monthly basis has commenced w.e.f. Dec'2014 and the same will be continued in future also.	e) Refer to comments against para (c) above.
		f) It is ironical that PSPCL has not been able to put meters on AP motors running on urban feeders during 2013-14. The directive of the Commission to provide meters on all AP motors fed from urban feeders is reiterated with further direction to ensure compliance within six months otherwise all such consumers shall be treated as being	f) There are 12354 no AP connections running on urban feeders and meters are installed on 5152 no AP connections. There are 7202 AP consumers where meters are required to be installed. Directions have already been given for providing 100% metering on AP motors running on urban feeders.	f) No progress to provide meters on AP motors fed from urban feeders has been made by PSPCL during FY 2014-15 which indicate total lack of initiative on the part of the licensee to implement the directions of the Commission. The directive is reiterated to ensure compliance

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
		fed from AP feeders.		immediately otherwise all such consumers shall continued to be treated as being fed from AP feeders.
		(ii) Metering Plan Despite repeated queries PSPCL has failed to submit any proposal to achieve 100% metering thus violating the provisions of the Act. The Commission reiterates its directive to PSPCL to implement AMR-LT capacitor model on AP motors to provide least cost & efficient solution to 100% AP metering. PSPCL is directed to submit its plan to achieve 100% metering as per Section-55 of the Act, within three month of the issuance of this Tariff Order.	Although section 55 of Act provides for 100% metering of all consumers but installation of meters on a category of consumers which are metered on flat rate will not serve any purpose except recording energy. Installation of 100 % meters on all 11.889 lac consumers is a huge Task and involves following • Total cost involved in installation of 12 lac AMR meters is around Rs 1000 Cr • Recording monthly readings not only involves connectivity issues but also requires huge infrastructure, additional manpower and software licences cost. No utility in India has carried out AMR for such large number of consumers. So far only utilities have carried out AMR of large consumers numbering from hundreds to few thousand • Replacement of defective meters or modems will also involve huge cost • It is normally seen that infrastructure used only for study purposes gets abandoned after some time and investment so made also get lost • PSPCL is preparing DPR's under IPDS scheme for availing funds to install meters on AP consumers in phased manner.	In previous Tariff Order, PSPCL was directed to submit its plan to achieve 100% metering as per Section-55 of the Act, within three month of the issuance of the Tariff Order but the utility failed to submit any plan in this regard. It is matter of serious concern that licensee is adamant in violating the provisions of the Act by citing financial and administrative constraints. PSPCL is again directed to utilise the liberal funding available under Deendayal Upadhyaya Gram Jyoti Yojana of MoP/GoI to fulfil the mandate of the Act regarding 100% metering of all consumers.
6.6	**kVAh Tariff**	The Commission approved the proposal of PSPCL to introduce kVAh tariff for LS, MS, BS, Railways and DS/NRS categories above load of 100 kW..	The Proposal was submitted to the Hon'ble Commission vide this office memo No.2779 dated 07.11.2013 and public hearings on the issue were held. As per Tariff Order for FY 2014-15, KVAH Tariff has been introduced for large supply, medium supply, bulk supply, railway traction, DS (load more than 100 kw) and NRS (load more than 100 kw) categories of consumers w.e.f. 01.04.2014.	The Commission notes the compliance. Refer para 5.1 of this Tariff Order also. The proposal for left over categories may be framed by PSPCL.
6.7	**Two Part Tariff / TOD**	**Two Part Tariff:** Commission reiterates its directive to PSPCL, to examine the issues raised by various stakeholders and re-submit the proposal.	The proposal for Introduction & Implementation of **Two Part Tariff** was submitted to the PSERC vide this office memo no. 1305/CC/DTR-233 dated 01.01.2013. The PSERC in Tariff Order for FY 2013-14 directed the PSPCL to examine the issues raised by the consumers/consumer organizations, and conduct mock trial/parallel run of the proposed Two Part Tariff system, at	Refer para 5.2 of this Tariff Order

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
			least in five selected Divisions of PSPCL for 6 months, and submit a detailed report along with a more refined proposal for introduction of Two Part Tariff, addressing the concerns of the consumers/consumer organizations expressed during the processing of ARR for FY 2013-14 and also the observations made by PSPCL during the mock trial/parallel run. As per directions, the proposal for Two Part Tariff and the outcome of the Mock Trial on prescribed proforma was submitted to PSERC vide this office memo no 226/DTR/Dy.CAO/233/Vol.III dated 30.01.2014 & thereafter, Public Hearing was held on 28.03.2014. Replies of the objections were also sent to PSERC as well as the objectors. In the Tariff Order for FY 2014-15, the Commission has directed PSPCL to resubmit the Two Part Tariff proposal, after addressing the concerns of the majority of consumers/consumer associations. However, in the ARR for FY 2015-16 it has been submitted to PSERC that PSPCL is of a considered opinion that proposal submitted by PSPCL is the best possible proposal. Keeping in view the data available and since the final call on the introduction of the Two Part Tariff is to be taken by PSERC, the call to build consensus amongst various stakeholders need also to be taken by PSERC. Accordingly, it has been requested that the proposal already submitted with ARR of 2014-15 may again be considered for building consensus amongst the stakeholders.	
		ToD Tariff While introducing ToD tariff for LS & MS category consumers w.e.f 1.10.2014, PSPCL is directed to ensure testing & commissioning of ToD compliant meters provided by consumers by 30.9.2014. PSPCL is also directed to lay down specifications for ToD meters, shortlist the vendors and fix rates at which meters shall be available.	**ToD Tariff** In Tariff Order for FY 2013-14, ToD Tariff was also introduced. In Tariff Order for FY 2014-15, the Commission has introduced ToD tariff for Large Supply as well as Medium supply Categories. However, it is optional for both categories subject to arrangement of meters by the consumers who opt for it. **ToD** tariff shall remain operative from October to March of FY 2014-15. Instructions have been issued vide CC No.46/2014 dated 4.9.2014 for introduction of ToD.	**ToD Tariff** Refer para 5.3 of this Tariff Order. PSPCL should certify that all LS &MS consumers who opted for ToD Tariff by 15.9.14 have been provided duly tested ToD meters before 30.9.14 as per T.O. 2014-15. PSPCL should certify that specifications for ToD meters have been approved, vendors short listed and rates fixed for ToD meters. PSPCL should ensure that meters are available only at rates fixed by PSPCL.

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
6.8	**Employee Cost**	**(i) Implementation of PwC Report on Manpower** Commission notes the submission that the manpower strength of PSPCL has declined below the manpower strength proposed by PwC but is of the view that report intended not only to reduce employees' strength but also to increase productivity of existing manpower by re-deployment and re-training of the existing staff. Commission directs PSPCL to submit the action taken report on PwC report within 3 months of issue of Tariff Order.	PwC Report has already been submitted to BOD and is under consideration of the BOD. As such action plan on PwC report will be undertaken subsequently after approval of the same by BoD of PSPCL.	The PwC report on manpower planning was submitted to PSPCL in March 2011 and since its submission the reply of PSPCL in subsequent ARR petitions has been that report is under the consideration of Board of Directors. The Commission directed PSPCL to submit the action taken report on PwC report within 3 months of issue of Tariff Order for FY 2014-15 but instead of taking any decision on the report, the utility reiterated its position that report is under consideration of BoD. It indicates indecisiveness on the part of the utility to take appropriate decision on very important aspect of manpower planning. Commission reiterates its directive to PSPCL to submit the action taken report on PwC report within 2 months of issue of Tariff Order.
		(ii) Re-organisation of DS on functional lines PSPCL in its meeting dated 30.04.2012 had assured that re-organisation of DS on functional lines shall be completed all across Punjab by 30.06.2013. No further re-organisation of distribution set up has been undertaken during 2013-14 and no feedback on review of the plan has been submitted by PSPCL. The Commission has viewed this policy paralysis in PSPCL seriously. PSPCL is directed to implement re-organization of DS wing on top priority.	PSPCL has formulated committee comprising of Er Gurpal Singh EIC/ Commercial , Er K.S Khaira CE/ South, Er. S.K Chawla, SE/ City Amritsar, Er. Inderpal Singh Addl. SE/Comm. Model town Jalandhar to examine all existing models and study the similar functional models of other states and also suggest appropriate and most suitable that meets requirement of PSPCL w.r.t enhancement of operational efficiency, standard of performance, Right to service act etc. with a clear concept of responsibility and accountability . Committee shall submit its report within a period of two months.	PSPCL had been claiming excellent results due to re-organisation of distribution set-up but for last more than one year, PSPCL has discontinued the implementation of functional re-organisation with the plea that model is being re-examined in view of adverse feedback received from some field officers and consumers. In petition no. 4 of 2014, PSPCL informed the Commission that BODs in its meeting held on 27.05.2014 has constituted a committee to suggest a suitable model and will submit the report within 2 months. The

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				Commission in its Order dated 28.11.2014 directed PSPCL to furnish final plan for reorganisation of distribution setup along with half yearly targets by 31st Jan. 2015 but till date no plan or decision in this regards has been conveyed by PSPCL to the Commission. The Commission has indeed visualised such scenario and commented in the ibid Order that track record of PSPCL in taking timely decisions for tackling the issue of employees cost & productivity does not inspire confidence for speedy resolution of the issue by the utility. While taking a serious view of the repeated failure of PSPCL to take timely action on the issue of manpower productivity, Commission directs the utility to implement re-organization of DS wing on top priority.
		(iii) AMR of HT consumers PSPSL has failed to comply with the target given by the Commission. Commission reiterates its directive for implementation of AMR for all HT and MS consumers.	The MDAS application has been deployed at DC, Patiala. AMR Data from HT/select LT consumers is to be acquired through modems connected to HT/select LT meters. Till date 2204 modems have been installed for these consumers. Billing of high end consumers in the 7 towns integrated with DC is being carried out based on AMR data **Targets:** The AMR of HT consumers covered under R-APDRP Part A will be completed whenever town is declared "Go Live"	PSPCL in the reply to para 6.3(i) has claimed that 24 number towns have been declared "GO LIVE" but billing of only 7 towns on AMR has been reported. Commission directs PSPCL to ensure implementation of AMR in all R-APDRP towns by 30.6.2015 and remaining by March, 2016.
		iv)Distribution SCADA/DMS: The Commission notes the action being taken. PSPCL should emulate distribution SCADA of Reliance Energy/NDPL to cover its maximum area. This will not only help to reduce its manpower requirement but also help in increasing its efficiency & improve consumer service.	**Progress :**LOA has been placed on M/s Siemens. The detailed work Order is under issue. **Target and Remarks :**The process for making electrical network SCADA/DMS compatible falls under RAPDRP Part B. Hence, the completion of the project will depend on the readiness/completion of work by RAPDRP Part B vendors.	PSPCL must ensure implementation of SCADA along with R-APDRP works.

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
		(v) Unmanned Grid S/Stns The automation process needed to be expedited by PSPCL. Almost all grid sub stations of Reliance Energy Mumbai are unmanned & running successfully for last many years. PSPCL need to emulate such models to reduce its manpower requirement & increase efficiency.	At present there is no plan for unmanned sub-stations.	The direction to PSPCL was to expedite the process of setting up unmanned grid substations on the lines of progressive distribution utilities in the country. The utility is bound to take note of various directions issued by the Commission in public interest and in case of any difficulty in its implementation, the matter should have been taken up with detailed explanation but the reply of PSPCL that there is no plan for setting up un-manned stations indicate PSPCL's indifferent attitude towards directions being issued by the Commission to improve its functioning and introduction of latest technology & best practices in the field of distribution business for better consumer service. PSPCL is directed to intimate the reasons for not adopting such latest technologies within 2 months of issue of this Tariff Order.
		(vi)Training The Commission notes the action being taken. The process to train & re-train its manpower need to be continued by PSPCL to enhance efficiency of its staff. A faithful implementation of its own order on 'PSEB Training Policy' aiming at 'one week training for all' is a must.	Training Policy framed and adopted by erstwhile PSEB (Now PSPCL) is being followed since its inception to the extent possible with the existing infrastructure for regular training and re-training of the employees. The training policy has also been amended from time to time to make it more suitable to the fast changing environment. Apart from this, zonal training centres are being strengthened to disseminate various need based/role specific training to PSPCL's each and every employee. To enhance efficiency, a dedicated cell named ODMD (Organizational Development & Management Development) was established to implement Modern Management Techniques in the organisation. To name a few achievements	PSPCL may take appropriate action for periodic training of its manpower to increase the efficiency and productivity.

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
			are as under : • workshops on value actualization have been integrated into all the in-house training programmes being conducted all across PSPCL to cover maximum nos. of employees in order to disseminate the adopted vision, mission and core values of PSPCL. • workshops on "Building Organizational Effectiveness through Competency Mapping" have been conducted for 200 senior officers (EICs/CEs/Dy.CEs/SEs/Addl.SEs.) of PSPCL to develop PSPCL as a competency driven organisation. In these workshops, the mapping process had been integrated with OD intervention thus initiating the change management at top level of the organization. • Out of total 29 Nos. Quality Circles established in PSPCL, 10 no. non operation quality circles were prepared for competition through a focused training program. Post training, these QCs have shown remarkable improvement. Out of these 10 No. QCs, 6 were nominated to take part in Regional Convention of Quality Circle Forum of India (QCFI) at Haridwar on 31st August. 2014. At the convention 5 No. QCs bagged Gold Award and 1 No. QC got Bronze Award. 5 No. gold winning teams were further sent to participate in National Convention (HCQC-2014) held (18-22 Dec, 2014) at Pune. All teams with remarkable performance bagged 3 no. excellent and 2 no. distinguished awards. Role specific trainings are being organized from time to time on relevant subjects such as legal procedures, office procedure, communication etc.	
6.9	**Receivables**	Despite the concern shown by the Commission, receivables against Industrial category has further increased. PSPCL is directed to explain the increase in the amount of the receivable against Industrial category and to initiate steps to ensure its reduction.	To curb the accumulating defaulting amount, the status of defaulting amount is being monitored by the Management on month to month basis and suitable directions are being conveyed to EICs/CEs/DS for their expeditious clearance. The follow up action with EIC/CEs DS has already been taken to take effective steps to liquidate the Receivables especially of ISC category for which, the Hon'ble Commission has taken serious note.	The total receivables have increased from ₹71780.33 lac to ₹78648.43 lac and the increase is mainly against industrial category. The outstanding amount against Government departments also increased from ₹218.66 lac to ₹295.61 lac during this period.

<table>
<tr><th>Sr. No.</th><th>Issues</th><th>PSERC Directives for FY 2014-15</th><th>PSPCL reply</th><th>PSERC Comments & Directives for FY 2015-16</th></tr>
<tr><td></td><td></td><td></td><td>Category-wise Defaulting Amount ending 12/2014 viz-a-vis 03/2014 is as under: (Rs in lacs)
<table>
<tr><th>Category</th><th>Ending 3/14 (un-audited)</th><th>Ending 12/14 (un-audited)</th></tr>
<tr><td>ISC</td><td>38414.86</td><td>46245.47</td></tr>
<tr><td>AP</td><td>270.82</td><td>286.40</td></tr>
<tr><td>GSC</td><td>32425.24</td><td>31425.45</td></tr>
<tr><td>Others</td><td>669.41</td><td>691.11</td></tr>
<tr><td>Total</td><td>71780.33</td><td>78648.43</td></tr>
</table>
Defaulting amount statement ending 12/2014 and break up of receivables outstanding against Govt. department are submitted to the Commission.</td><td>PSPCL is directed to explore the possibility of installing pre-paid meters on the connections being released to Government departments in consultation with State government.</td></tr>
<tr><td>6.10</td><td>Mtc. of category wise details of Fixed Assets</td><td>The Commission notes the action being taken.</td><td>Company Act. 2013 has came into force w.e.f. 29.8.2013 vide Central Govt. Notification No. 27 dated 30.8.2013. The Accounting Standards are to be revised under section 133 of the ibid Act. In view of this W.O.No. 1/CAO/WM&G/A-246 dated 20.12.2013 has been issued to the firm M/s Ernst & Young LLP, Kolkata to standardize various processes and procedures by developing and documenting the Financial Accounting Manuals, Budgeting, Audit and Internal Control under the provision of this new Company Act and Accounting Standards framed thereunder. The consultants has submitted "As is Report" and work is in progress. The review of Fixed Assets Records also falls within the scope of this work.</td><td>PSPCL is directed to take immediate action as per Companies Act 2013.</td></tr>
<tr><td>6.11</td><td>Power purchase from Traders and through UI</td><td>The Commission notes the action being taken.</td><td>PSPCL is following the Power purchase regulations notified by Commission while making short term power purchase. Hon'ble PSERC vide its order dated 29.9.2014 approved quantum of 3028.99 MUs only under short term purchase through tenders. The actual quantum and cost of short term power purchase shall be submitted by PSPCL to PSERC at the time of review/true up for FY 2014-15. PSPCL have purchased 2799 MUs through tenders.</td><td>(i) The Commission in para 97 of its order dated 10.10.2014 in case of petition no. 12/2014 (suo motu) had observed that PSPCL has already appointed consultants to develop models for optimal power procurement and sale and the models being developed by them are expected to go live by September, 2014. The Commission in the ibid order had directed PSPCL to submit the model developed by the consultants for optimal power procurement and sale of power within 30 days from the date of the order. A period of more than 6 months has elapsed, no such model as directed by the Commission has been submitted. PSPCL is again directed to submit the model developed by the consultants, within 30 days of</td></tr>
</table>

Sr. No.	Issues	PSERC Directives for FY 2014-15	PSPCL reply	PSERC Comments & Directives for FY 2015-16
				the issue of the Tariff Order. (ii) The Commission in para 118 of the ibid order had observed that the trading margin being paid for banking agreements signed through intermediary traders can be avoided through direct banking, as PSPCL has the requisite expertise to carry out the same, and hence it will be preferable that PSPCL enters into the banking arrangements directly, until it is absolutely essential to have involvement of trading companies. The action taken in the matter be intimated to the Commission, within 30 days of the issue of the Tariff Order. (iii) The Commission in para 126 of the ibid order has desired to submit the information on daily/monthly basis and also upload on its website with regard to power purchase etc. PSPCL is directed to intimate the action taken in the matter within 30 days of the issue of the Tariff Order and confirm that the information as directed by the Commission in its ibid order is being uploaded on the website of PSPCL.
6.12	**Loading status of sub-transmissi-on system (66 kV & 33 kV)**	During processing of ARR for FY 2013-14, PSPCL committed to complete the priority works (161 nos.) before 31.05.2013. PSPCL should ensure completion of de-loading of sub-stations at the earliest to ensure flow of adequate power which shall be available with PSPCL in future.	Out of 161 No. priority works, 154 No. works has been completed/ Commissioned. List of overloaded 66/33 kV grid S/Stns (loading above 70%) along with its status is available on the website of PSPCL and is regularly updated.	PSPCL should ensure de-loading of overloaded sub-stations before Paddy 2015.
6.13	**Cost Audit of generating stations**	The Commission notes the action being taken.	M/s Khushwinder Kumar & Co., Jalandhar has been appointed as cost auditor for the year 2011-12 vide Work Order No.01 dated 14.10.2011. The work of maintaining the cost accounting records for year 2010-11 & 2011-12 had been allotted to M/s Khurana & Co. vide Work Order No.02 dated 29.3.2012 and work of maintaining the cost accounting records had already been in process towards finalization. Cost auditor has submitted the cost audit report of PSPCL for the year 2011-12 and Annexures thereto. The copy of Cost Audit Report will be sent to PSERC on approval of BOD.	The Commission notes the action being taken.

<table>
<tr><th>Sr. No.</th><th>Issues</th><th>PSERC Directives for FY 2014-15</th><th>PSPCL reply</th><th>PSERC Comments & Directives for FY 2015-16</th></tr>
<tr><td>6.14</td><td>AMR of DS/ NRS consumers</td><td>The Commission notes the action being taken. Progress may be reported from time to time.</td><td>At present successful techno-commercial model of AMR of DS/NRS consumers is yet to be developed in the country. However, EIC/IT is working on the pilot project of smart grid.
"…Ministry of Power (GOI) has taken up an initiative for establishing Smart Grid pilot project in India for increasing power availability, reducing AT&C losses and optimal utilization of resources for sustainable growth. For implementation of this pilot project in Punjab, a DPR of smart grid pilot project for 9 no. feeders of Tech. II Subdivision pilot include functionalities of AMI for residential & Industrial consumer and Peak Load Management. It is further intimated that this project is yet at the incipient stage and may take long time of 2 to 3 years for execution."</td><td>The Commission notes the action being taken.</td></tr>
<tr><td>6.15</td><td>Improvem-ent in quality of service</td><td>The Standard of Performance (SOP)
The Commission notes the action being taken.</td><td>Instructions have already been issued to display SOP notified by Commission
Reliability indices is being uploaded on PSPCL website regularly.</td><td>PSPCL is not adhering to the SoP particularly with regard to replacement of burnt/ damaged meters, attending to complaints/service requests. PSPCL should ensure strict compliance of SoP notified by the Commission.</td></tr>
<tr><td>6.16</td><td>Fuel Audit of various Thermal Plants of PSPCL</td><td>The direction to PSPCL to report the progress made to the Commission every quarter, with regard to the implementation of these directions is reiterated.
Despite implementing & attaining the norm of 150 kcal/kg & even lower, PSPCL observation that it was 'not implementable' is incorrect. Latest progress of work undertaken by PSPCL as laid down in CPRI report on Fuel Audit to improve its efficiency may be intimated within one month of issuance of this Tariff Order.</td><td>The implementation ending Dec.'2014 of the directives in Orders dated 27.02.2013 along with the status of implementation of recommendations given by CPRI has been provided The Comparison of GCV of received and bunkered coal is as under:
<table>
<tr><td colspan="4">GGSSTP, Rupnagar</td></tr>
<tr><td>MONTH</td><td>Receipt Coal GCV (AFB) (Kcal /Kg)</td><td>Bunkered Coal GCV (AFB) (Kcal /Kg)</td><td>Difference in GCV (AFB) (Kcal /Kg)</td></tr>
<tr><td>July-14</td><td>4092</td><td>3692</td><td>400</td></tr>
<tr><td>Aug-14</td><td>3922</td><td>3683</td><td>239</td></tr>
<tr><td>Sep.-14</td><td>3876</td><td>3666</td><td>210</td></tr>
<tr><td>Oct-14</td><td>3783</td><td>3585</td><td>198</td></tr>
<tr><td>Nov-14</td><td>3995</td><td>3680</td><td>315</td></tr>
<tr><td colspan="4">GHTP, Lehra Mohabat</td></tr>
<tr><td>July-14</td><td>4088</td><td>3939</td><td>149</td></tr>
<tr><td>Aug-14</td><td>3998</td><td>3863</td><td>135</td></tr>
<tr><td>Sep.-14</td><td>4122</td><td>3974</td><td>148</td></tr>
<tr><td>Oct-14</td><td>3903</td><td>3801</td><td>102</td></tr>
<tr><td>Nov-14</td><td>4118</td><td>4013</td><td>105</td></tr>
<tr><td colspan="4">GNDTP, Bathinda</td></tr>
<tr><td>July-14</td><td>4148.09</td><td>4026.02</td><td>122.07</td></tr>
<tr><td>Aug-14</td><td>4275.93</td><td>4174.43</td><td>101.50</td></tr>
<tr><td>Sept-14</td><td>4191.20</td><td>4079.27</td><td>111.93</td></tr>
<tr><td>Oct-14</td><td>4288.72</td><td>4240.13</td><td>48.59</td></tr>
<tr><td>Nov-14</td><td>4152.93</td><td>4060.13</td><td>92.80</td></tr>
</table></td><td>The Commission notes the compliance made by PSPCL as far as supplying information in the matter on quarterly basis is concerned and further directs to continue to supply the same in future also.
PSPCL is directed to maintain difference in GCV between received and bunkered coal as per regulations.</td></tr>
<tr><td>6.17.</td><td>Review of PPAs with</td><td>PSPCL is directed to submit the report at the earliest.</td><td>PSPCL has already handed over copies of PPAs to the firm (Marcados). Work for studying/reviewing the PPAs is in progress.</td><td>PSPCL is directed to carry out the job at the earliest and submit action taken report</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Issues</th><th>PSERC Directives for FY 2014-15</th><th>PSPCL reply</th><th>PSERC Comments & Directives for FY 2015-16</th></tr>
<tr><td></td><td>Generators / Traders for purchase of power from outside the State of Punjab.</td><td></td><td></td><td>along with next ARR. Top priority should be given to this work in view of surplus power in the State.</td></tr>
<tr><td>6.18</td><td>Audited Annual Accounts for FY 2012-13 and FY 2013-14</td><td>PSPCL has submitted that the audit of account for FY 2012-13 is under process and is likely to be completed before filing of next ARR and Tariff Petition. PSPCL is directed to submit Audited Annual Accounts for FY 2012-13 and FY 2013-14 along with the audit report of Statutory Auditors and CAG of India at the time of filing of ARR Petition for FY 2015-16.</td><td>Accounts for FY 2012-13 stands audited by statutory Auditors and the same has been submitted to CAG of India for supplementary audit and audit certificate is awaited. Annual Accounts for FY 2013-14 are being prepared.</td><td>PSPCL has failed to submit audit report of CAG of India for FY 2012-13 and Audited Annual Accounts & CAG of India for FY 2013-14 in time resulting deferment of true up for these years. PSPCL is directed to ensure timely submission of audited annual accounts.</td></tr>
<tr><td>6.19</td><td>Per Unit Fuel Cost</td><td>The Per Unit Fuel Cost in respect of GGSSTP is more by around 11% than Per Unit Fuel Cost in respect of GHTP (Units I&II). PSPCL is directed to analyse the reasons for this higher Per Unit Fuel Cost in respect of GGSSTP and submit the action taken report for bringing the Per Unit Fuel Cost of GGSSTP to the level of GHTP (Units I&II), within two months of the issue of this Tariff Order.</td><td>PSPCL receives coal from its captive coal mine PANEM and CIL subsidiaries viz SECL (Raw and Washed coal), BCCL, CCL (Raw and Washed). The coal being used at GGSSTP is from all sources as mentioned whereas GHTP and GNDTP use coal only from PANEM and CCL (Raw and Washed coal) of which CCL Raw coal quantity is very less. Out of all these, the coal supplied from the PANEM is cheapest and from SECL and BCCL is quite expensive. The percentage of PANEM coal out of total coal received at three plants over the years is as under:
<table>
<tr><th rowspan="2">Year</th><th colspan="3">PANEM Coal percentage Out of Total Coal Received</th></tr>
<tr><th>GGSSTP</th><th>GNDTP</th><th>GHTP</th></tr>
<tr><td>2009-10</td><td>50.81%</td><td>64.26%</td><td>79.19%</td></tr>
<tr><td>2010-11</td><td>60.44%</td><td>67.10%</td><td>77.41%</td></tr>
<tr><td>2011-12</td><td>61.37%</td><td>83.49%</td><td>77.51%</td></tr>
<tr><td>2012-13</td><td>55.31%</td><td>66.51%</td><td>71.77%</td></tr>
<tr><td>2013-14</td><td>51.02%</td><td>68.32%</td><td>66.84%</td></tr>
<tr><td>2014-15 (Upto Nov-14)</td><td>32.65%</td><td>48.85%</td><td>43.45%</td></tr>
</table>
This clearly shows that the major chunk of coal received at GNDTP and GHTP is of cheaper value whereas that at GGSSTP is of expensive value. This effect is also evident from the following table:
<table>
<tr><th rowspan="2">Year</th><th colspan="3">Coal Cost (Rs/MT)</th></tr>
<tr><th>GGSSTP</th><th>GNDTP</th><th>GHTP</th></tr>
<tr><td>2009-10</td><td>2779.54</td><td>2560.00</td><td>2602.00</td></tr>
<tr><td>2010-11</td><td>2896.32</td><td>2723.00</td><td>2717.00</td></tr>
<tr><td>2011-12</td><td>3081.20</td><td>2968.00</td><td>2944.00</td></tr>
</table></td><td>PSPCL is further directed to take note of the cost per unit while backing down its generating plants.</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Issues</th><th>PSERC Directives for FY 2014-15</th><th>PSPCL reply</th><th>PSERC Comments & Directives for FY 2015-16</th></tr>
<tr><td></td><td></td><td></td><td><table>
<tr><td>2012-13</td><td>3718.34</td><td>3396.00</td><td>3457.00</td></tr>
<tr><td>2013-14</td><td>4054.08</td><td>3564.00</td><td>3582.00</td></tr>
<tr><td>2014-15 (Upto Sept-14)</td><td>4147.92</td><td>3717.00</td><td>3719.00</td></tr>
</table>
In view of above, it is submitted that the main reason for higher coal cost at GGSSTP as compared to GNDTP and GHTP is the disproportion in the various types of coal received at the respective stations.</td><td></td></tr>
<tr><td>6.20</td><td>System Analysis wings</td><td>PSPCL should establish system analysis wings under CE/Planning and CE/PPR to conduct planning and system operation studies respectively.
The technical proposals submitted to the Commission requiring the system analysis studies should invariably be supported by these studies (load flow/short circuit/stability studies etc.)</td><td>Analysis wing has been created in the Planning Organisation vide O/o No.03/SE/Plg-3 dated 02.01.2015 in compliance to the directive of PSERC issued against the suo-moto petition No. 54/2014. Planning Organisation is studying and also taking up the matter with designers/suppliers of existing software and with various power utilities and organisations in context of using the software for sub transmission system analysis at voltage level of 66 KV/33 KV/11 KV.</td><td>The Commission notes the action being taken.</td></tr>
<tr><td>6.21</td><td>Updating of consumer's Security Registers, payment of interest on Security Consumption and Security Meter</td><td>The Commission directs PSPCL to submit the certificate within two months of issuance of this tariff order that consumer's security registers have been updated and annual interest on Security (Consumption) and Security (Meter) payable upto FY 2013-14 has been credited to the accounts of all eligible consumers as per provisions of the Supply Code.</td><td>Payment of interest on security consumption and security meter was given to the all categories of consumers for the FY 2013-14. For updation of security registers, the Additional ACD as given by distribution organisation in the form of advices for the FY 2013-14 has been updated in the consumers accounts.</td><td>The claim of PSPCL that interest on security for FY 2013-14 has been made to all consumers appears to be incorrect since during public hearings held on ARR petition for FY 2015-16, various consumer representatives complained that interest has not been paid to all the consumers. This fact is further corroborated by the ARR figures which shows a payment of ₹150 crore against a security deposit of ₹2292 crore during 2013-14. At interest rate of 11.70% payable during 2013-14, the amount of interest paid to consumers should have been almost double.
While taking a serious view of the harassment of general consumers, PSPCL is directed to ensure updation of consumer's security register and submit a certificate on affidavit that annual interest on Security (Consumption) and Security (Meter) payable</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Issues</th><th>PSERC Directives for FY 2014-15</th><th>PSPCL reply</th><th>PSERC Comments & Directives for FY 2015-16</th></tr>
<tr><td></td><td></td><td></td><td></td><td>upto FY 2014-15 along with penal interest, where ever payable due to delay in payment of interest, has been credited to the accounts of all eligible consumers as per regulation 17 of the Supply Code 2014.</td></tr>
<tr><td>6.22</td><td>Introducti-on of Contract Demand System</td><td>The Commission in para 7.4 of the Tariff Order has approved introduction of Contract Demand System for Medium Supply Industrial category consumers. To move further in this direction, the Commission intends to introduce Contract Demand System for the left out categories/consumers, i.e. for all 3 phase DS/NRS/SP Industrial consumers. In these days, every day new equipments are coming up in the market and consumers are interested in installing such equipments. The introduction of Contract Demand System for these categories will facilitate these consumers to install the load/equipments of their requirement and at the same time keep their contract demand within the sanctioned limit. PSPCL is directed to submit a road map for introduction of Contract Demand System for these categories/consumers, within two months of the issue of the Tariff Order.</td><td>The Hon'ble PSERC has directed to submit road map for introduction of contract demand system for all the three phase DS/NRS/SP industrial consumers within 2 months. Introduction of contract demand system for all the three phase DS/NRS/SP consumers shall be fruitful only if compatible meters for recording MDI for previous months and current month are available.
For introduction of this system to the existing three phase DS/NRS/SP Industrial, there are approximately 1,66,907 consumers for which PSPCL will have to install compatible meters and installation/downloading of data from such a large number of meters every month shall not be practically possible. The category-wise details of consumers are as under:
<table><tr><td>3-Phase DS consumers</td><td>48845</td></tr><tr><td>3-Phase NRS consumers</td><td>37265</td></tr><tr><td>SP industrial consumers</td><td>80797</td></tr></table>Thus, it is not possible to introduce the contract demand system for this category of consumers in one step. As PSPCL is going to implement the CD regime on MS consumers w.e.f. 01/01/2015, therefore, it is proposed to first watch the outcome of this CD regime on MS category and after which the contract demand system will be introduced on this category of consumers.
Moreover, Latest status is as per PSERC MoM dated 18.12.2014.</td><td>Refer Para 5.1 of this Tariff Order.
PSPCL is directed to submit a road map for introduction of Contract Demand System for remaining category of consumers within 3 months of the issue of this Tariff Order.</td></tr>
</table>

New Directives in Tariff Order for FY 2015-16

Sr. No	Issue	Directive
6.23	Calculation of depreciation as per straight line method	PSPCL is directed to claim the depreciation for assets in the next ARR as per straight line method over the useful life of the asset at the rate of depreciation as specified by the CERC provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station/line shall be spread over the balance useful life of the assets.
6.24	Proper sealing/locking of pillar boxes/MCBs	The Commission has repeatedly directed PSPCL to ensure that all pillar boxes and MCBs housing meters in public places or outside consumer premises must be properly locked and sealed. The Commission directs PSPCL to do the needful and submit a certificate within two months of the issue of this Tariff Order that all pillar boxes/MCBs have been properly sealed/locked.
6.25	Periodic Checking of meters	Regulation 21.3 of the Supply Code 2014 provides for periodic inspection/ testing of all meters/metering equipment installed at the consumers' premises in the given time schedule. It has been brought to the notice of the Commission that EHT metering equipments are not being tested at site by the licensee. PSPCL is directed to ensure compliance of the regulations and report compliance within two months of the issuance of this Tariff Order. PSPCL should check the multiplying factor of all C.T./P.T. meters and report compliance within 6 month of issue of this Tariff Order.
6.26	Replacement of defective energy meters at Grid Sub-station	PSPCL is directed to ensure that all the energy meters installed at various grid sub-stations record correct energy. Any meter found defective must be replaced within 10 working days. Similarly any other defect contributing to wrong recording of the energy must be rectified within 10 days. The defective meter shall be got tested from MMTS/ME lab and the report should be submitted to the Commission. PSPCL is directed to check multiplying factors of all energy meters & report compliance within 3 month of issue of this Tariff Order.
6.27	Calculation of AT&C losses	PSPCL is directed to calculate AT&C losses along with T&D losses w.e.f 01.04.2015
6.28	Power Regulatory Measures	PSPCL is directed to ensure clear, proper and timely advance intimation of scheduled power cuts/other regulatory measures to the consumers. All unscheduled power cuts shall be put on the website of PSPCL on the next day giving reasons and duration of such regulatory measures.
6.29	Assessment of T&D losses on AP feeders	Since PSPCL has not implemented Section 55 of the Act mandating 100% metering, therefore, to estimate the T&D loss level on AP feeders, PSPCL is directed to cover atleast 5% pure AP feeders spread all over the state under 100% metering by December, 2015 and to engage an independent agency to record metered sale and pumped energy of these AP feeders to calculate T&D losses.
6.30	Implementation of Commission's order dated 04.12.2014 in case of petition no. 54 of 2014 in the matter of Technical Audit of works executed by PSTCL and PSPCL for development of transmission, sub-transmission system from 01.04.2010 to 31.03.2013	PSPCL is directed to submit the action taken report on quarterly basis on various directives issued in the Commission's order dated 04.12.2014 in case of petition no. 54 of 2014. The first such quarterly report ending June, 2015 is to be submitted by 31.07.2015 and next quarterly reports should be submitted by 31.10.2015, 31.01.2015 and 30.04.2016.
6.31	Sale of Surplus Power	PSPCL is directed to prepare a plan for sale of surplus power available in the State in the market & submit quarterly progress to the Commission.

Chapter 7
Determination of Tariff

7.1 Annual Revenue Requirement

The Commission has determined the ARR of PSPCL for FY 2015-16 at ₹25952.32 crore. In the ARR, PSPCL has submitted Annual Audit Accounts for FY 2012-13, but without CAG Audit Comments. PSPCL submitted the CAG Audit Comments on the Audited Annual Accounts for FY 2012-13 on 27.03.2015, but the Commission is not considering these comments and not carrying out the True up of FY 2012-13 as discussed and decided in Chapter 2 of this Tariff Order. Further, PSPCL has submitted that the auditing of accounts for FY 2013-14 is under process. As such, the Commission has decided not to undertake the True up for FY 2013-14 also, as discussed and decided in Chapter 2 of this Tariff Order. The review for FY 2014-15 indicates surplus of ₹53.60 crore up to FY 2014-15. The Commission has determined the revenue gap (deficit) of ₹126.67 crore for FY 2015-16 and consolidated gap (deficit) of ₹45.98 crore, including surplus of ₹53.60 crore up to FY 2014-15 and carrying cost (recovery) of ₹27.09 crore on revenue gap for FY 2014-15.

7.2 Determination of Retail Supply Tariff

7.2.1 In determining tariff, the Commission is guided by the principles laid down in Section 61 of the Act as well as its own Regulations which provide the framework for working out the ARR of a power utility and tariff for different categories of consumers. The Commission has also kept in view the relevant aspects of the National Electricity Policy, Tariff Policy, the norms adopted by it in earlier Tariff Orders and inputs received from consumers/consumer organizations/ stakeholders in their objections and during the process of public hearings.

7.2.2 As the consolidated gap (deficit) determined by the Commission is nominal, the Commission has decided not to raise tariff & MMC across the board and leave the gap uncovered. However, the Commission has adjusted the tariff of some categories, in view of social and regulatory requirements. Regulation 7(2) of the PSERC (Terms and Conditions for Determination of Tariff), Regulations, 2005 states that :

"The Commission shall determine the tariff so that it progressively reflects the combined average unit cost of supply and the cross subsidy as defined above shall be reduced gradually to ± 20% of the average cost of supply."

The cross subsidy levels for all categories of consumers are within ±20% of the combined average cost of supply.

7.2.3 The existing and revised tariffs are indicated in Table 7.1.

Table 7.1: Existing and Revised Tariff for FY 2015-16

Sr. No.	Category of Consumers	Existing Tariff		Revised Tariff approved by the Commission	
		Energy Rate	MMC (₹)	Energy Rate	MMC (₹)
A) PERMANENT SUPPLY					
1A.	**Domestic (for loads upto 50kW)**				
a)	Upto 100 kWh	456 paise/kWh	52/kW	452 paise/kWh	52/kW
b)	Above 100 kWh and upto 300 kWh	614 paise/kWh		614 paise/kWh	
c)	Above 300 kWh	656 paise/kWh		656 paise/kWh	
1B.	**Domestic (for loads exceeding 50 kW and upto 100kW) (from 01.04.2015 to 30.09.2015)**				
a)	Upto 100 kWh	456 paise/kWh	52/kW	452 paise/kWh	52/kW
b)	Above 100 kWh and upto 300 kWh	614 paise/kWh		614 paise/kWh	
c)	Above 300 kWh	656 paise/kWh		656 paise/kWh	
1C.	**Domestic (for loads exceeding 50 kW and upto 100kW) (from 01.10.2015 to 31.03.2016)**				
a)	Upto 100 kWh/kVAh	456 paise/kWh	52/kW	407 paise/kVAh	47/kVA
b)	Above 100 kWh /kVAh and upto 300 kWh/kVAh	614 paise/kWh		553 paise/kVAh	
c)	Above 300 kWh/ kVAh	656 paise/kWh		590 paise/kVAh	
1D.	**Domestic (for loads/demand exceeding 100kW/kVA)**				
a)	Upto 100 kVAh	420 paise/kVAh	47/kVA	416 paise/kVAh	47/kVA
b)	Above 100 kVAh and upto 300 kVAh	565 paise/kVAh		565 paise/kVAh	
c)	Above 300 kVAh	604 paise/kVAh		604 paise/kVAh	
2A.	**Non-Residential Supply (for loads upto 50kW)**				
a)	Upto 100 kWh	657 paise/kWh	190/kW	653 paise/kWh	190/kW
b)	Above 100 kWh	671 paise/kWh		675 paise/kWh	
2B.	**Non-Residential Supply (for loads exceeding 50 kW and upto 100kW) (from 01.04.2015 to 30.09.2015)**				
a)	Upto 100 kWh	657 paise/kWh	190/kW	653 paise/kWh	190/kW
b)	Above 100 kWh	671 paise/kWh		675 paise/kWh	
2C.	**Non-Residential Supply (for loads exceeding 50 kW and upto 100kW) (from 01.10.2015 to 31.03.2016)**				
a)	Upto 100 kWh/kVAh	657 paise/kWh	190/kW	588 paise/kVAh	171/kVA
b)	Above 100 kWh/kVAh	671 paise/kWh		608 paise/kVAh	

Sr. No.	Category of Consumers	Existing Tariff		Revised Tariff approved by the Commission	
		Energy Rate	MMC (₹)	Energy Rate	MMC (₹)
2D.	**Non-Residential Supply (for loads/demand exceeding 100kW/kVA)**				
a)	Upto 100 kVAh	604 paise/kVAh	171/kVA	601 paise/kVAh	171/kVA
b)	Above 100 kVAh	617 paise/kVAh		621 paise/kVAh	
3.	**Public Lighting**	669 paise/kWh	As per 8 hrs/Day	669 paise/kWh	As per 8 hrs/Day
4.	**Agricultural Pumpsets**	i) Without GoP subsidy:456 paise/kWh or ₹332/BHP/ month	Not Applicable	i) Without GoP subsidy:458 paise/kWh or ₹338/BHP/ month	Not Applicable
		ii) With GoP subsidy: NIL		ii) With GoP subsidy: NIL	
5.	**AP High-Technology/High Density Farming**	456 paise/kWh	Not Applicable	458 paise/kWh	Not Applicable
6.	**Compost Plants/Solid Waste Management Plants for Municipalities/ Urban Local Bodies**	456 paise/kWh	Not Applicable	458 paise/kWh	47/kVA
7.	**Industrial Consumers**				
a)	Small Power	585 paise/kWh	157/kW	585 paise/kWh	157/kW
b)	Medium Supply	587 paise/kVAh	209/kW or 188/kVA	587 paise/kVAh	188/kVA
c)	Large Supply				
i)	General Industry	614 paise/kVAh	188/kVA	614 paise/kVAh	188/kVA
ii)	PIU	633 paise/kVAh	491/kVA	633 paise/kVAh	491/kVA
iii)	Arc Furnace	633 paise/kVAh	491/kVA	633 paise/kVAh	491/kVA
8.	**Bulk Supply (including MES)**				
a)	HT	609 paise/kVAh	307/kVA	609 paise/kVAh	307/kVA
b)	LT	635 paise/kVAh		635 paise/kVAh	
9.	**Railway Traction**	651 paise/kVAh	314/kVA	655 paise/kVAh	314/kVA
10.	**Start-up Power for Generators/ CPPs**	614 paise/kVAh	Not Applicable	614 paise/kVAh	Not Applicable
11.	**Charitable Hospitals set-up under Persons with Disability (PwD) Act, 1995**				
a)	For loads upto 100kW	456 paise/kWh	52/kW	452 paise/kWh	52/kW
b)	For loads exceeding 100kW	420 paise/kVAh	47/kVA	416 paise/kVAh	47/kVA
B)	**SEASONAL INDUSTRY: COTTON GINNING, PRESSING AND BAILING PLANTS, RICE SHELLERS, KINNOW GRADING AND WAXING CENTRES, RICE BRAN STABILISATION UNITS (WITHOUT T.G.SETS) (SP, MS, LS)**				
a)	During Season				
	SP	585 paise/kWh	574/kW	585 paise/kWh	574/kW
	MS	587 paise/kVAh	574/kW or 518/kVA	587 paise/kVAh	518/kVA
	LS	614 paise/kVAh	518/kVA	614 paise/kVAh	518/kVA

Sr. No.	Category of Consumers	Existing Tariff		Revised Tariff approved by the Commission	
		Energy Rate	**MMC (₹)**	**Energy Rate**	**MMC (₹)**
b)	Off Season				
	SP	690 paise/kWh	NA	690 paise/kWh	NA
	MS	731 paise/kVAh	NA	731 paise/kVAh	NA
	LS	740 paise/kVAh	NA	740 paise/kVAh	NA
C) ICE FACTORY & ICE CANDIES AND COLD STORAGE					
a)	April to July				
	SP	585 paise/kWh	782/kW	585 paise/kWh	782/kW
	MS	587 paise/kVAh	782/ kW or 704/kVA	587 paise/kVAh	704/kVA
	LS	614 paise/kVAh	704/kVA	614 paise/kVAh	704/kVA
b)	August to March Next Year				
	SP	585 paise/kWh	157/kW	585 paise/kWh	157/kW
	MS	587 paise/kVAh	157/kW or 140/kVA	587 paise/kVAh	140/kVA
	LS	614 paise/kVAh	140/kVA	614 paise/kVAh	140/kVA
D) GOLDEN TEMPLE, AMRITSAR AND DURGIANA TEMPLE, AMRITSAR					
a)	First 2000 kWh	Free	NA	Free	NA
b)	Beyond 2000 kWh	532 paise/kWh	NA	532 paise/kWh	NA
E) TEMPORARY SUPPLY					
i)	Domestic	1139 paise/kWh (for loads upto 100kW)	₹965 or ₹192/kW whichever is higher	1139 paise/kWh (for loads upto 100kW)	₹965 or ₹192/kW whichever is higher
		1048 paise/kVAh (for loads exceeding 100kW)	₹965 or ₹173/kVA whichever is higher	1048 paise/kVAh (for loads exceeding 100kW)	₹965 or ₹173/kVA whichever is higher
ii)	NRS	1139 paise/kWh (for loads upto 100kW)	₹1932 or ₹484/kW whichever is higher	1139 paise/kWh (for loads upto 100kW)	₹1932 or ₹484/kW whichever is higher
		1048 paise/kVAh (for loads exceeding 100kW)	₹1932 or ₹436/kVA whichever is higher	1048 paise/kVAh (for loads exceeding 100kW)	₹1932 or ₹436/kVA whichever is higher
iii)	Industrial (SP,MS & LS)	As per Tariff approved at A(7) above for permanent supply + 100%	₹774/kW for SP, 774 per kW / 697 per kVA for MS & ₹697/kVA for LS	As per Tariff approved at A(7) above for permanent supply + 100%	₹774/kW for SP, 697 per kVA for MS & ₹697/kVA for LS
iv)	Wheat Threshers	As per Tariff approved at A(7) above for permanent supply + 100%	₹774/kW for SP, 774 per kW / 697 per kVA for MS & ₹697/kVA for LS	As per Tariff approved at A(7) above for permanent supply + 100%	₹774/kW for SP, 697 per kVA for MS & ₹697/kVA for LS
v)	Fairs, Exhibition & Mela Congregations	Bulk Supply tariff as at A(8) + 50%	₹7730 per service	Bulk Supply tariff as at A(8) + 50%	₹7730 per service
vi)	**Touring Cinemas**				
a)	Lights and Fans	1139 paise/kWh	For (a) and (b), ₹1932 or ₹484/kW or ₹436/kVA of sanctioned load/demand, whichever is higher	1139 paise/kWh	For (a) and (b), ₹1932 or ₹484/kW or ₹436/kVA of sanctioned load/demand, whichever is higher
b)	Motive Load	Rate for Industrial permanent supply as at A(7) + 100%		Rate for Industrial permanent supply as at A(7) + 100%	

Notes:

(i) The Schedules of Tariff with revised rates of tariff for various categories of consumers as approved by the Commission are as per Annexure II, Volume-II of this Tariff Order. These Schedules shall be read with the updated provisions of General Conditions of Tariff approved by the Commission as per Annexure I, Volume-II of this Tariff Order;

(ii) SC and Non SC BPL Domestic consumers with connected load upto 1000 watts will be given 200 units of free power per month in view of GoP subsidy;

(iii) AP consumers and consumers mentioned in (ii) above will not be charged meter rentals in view of Government Subsidy;

(iv) Cooperative Group Housing Societies/ Employers availing single point supply under PSERC (Single Point Supply to Cooperative Group Housing Societies/Employers) Regulations will be levied monthly minimum charges as applicable to Domestic Supply consumers with load exceeding 100 kW i.e. ₹47 per kVA.

(v) Consumers getting single point supply for providing electricity to ultimate users shall be eligible for rebate @ 12% of electricity consumption charges in case of the Residential Colonies/Co-operative Group Housing Societies/Employers Colonies and @10% of electricity consumption charges in case of Commercial Complexes/Shopping Malls/Industrial Estates etc., in addition to other voltage rebates as may be applicable;

(vi) 10 paise/kVAh on pro-rata basis, on continuous process industries, shall continue to be levied as here-to-fore.

(vii) Rebate of 30 paise/kVAh to all consumers getting supply at 400/220/132 kV, 25 paise/kVAh to all consumers getting supply at 66/33 kV, 20 paise/kVAh to DS, NRS & MS consumers getting supply at 11 kV and 20 paise/kWh to AP/AP High-Technology, High Density Farming Compost Plants/Solid Waste Management Plants for Municipalities/ Urban Local Bodies consumers getting supply at 11 kV shall be allowed.

7.3 Effect of revised tariff on cross subsidy

7.3.1 The Commission in its Tariff Regulations has defined cross subsidy for a consumer category as the difference between the average realisation per unit from that category and the combined average cost of supply, expressed in percentage terms. The cross subsidy levels for different categories of consumers as worked out for energy sales for FY 2015-16 at revised tariff are depicted in Table 7.2.

7.3.2 Category-wise MMC income has been computed by apportioning the same in the ratio of energy sale to different categories, except AP, Common Pool and Outside State sale. Non-tariff income has been apportioned in the ratio of energy sale to different categories, except Outside State sale, while PLEC has been loaded to the LS category only. Impact of High Voltage Rebate, ToD Tariff and ToD rebate for adjusting PLEC have been deducted from the revenue of relevant categories.

Table 7.2: Cross Subsidy Levels for Energy Sales of FY 2015-16 at Revised Tariff (Combined average cost of supply = 597.81 paise/unit)

Sr. No.	Consumer Category	Energy Sales (MU)	Revised Tariff (paise/ unit)	Revenue with Revised Tariff (₹ crore)	PLEC + MMC etc. (₹ crore)	Non-Tariff Income (₹ crore)	Impact of High Voltage Rebate, ToD Tariff and ToD rebate for adjusting PLEC (₹ crore)	Total Revenue (₹ crore) (V+VI+ VII-VIII)	Realisat-ion (Paise per unit)	Cross Subsidy Levels (%)
I	II	III	IV	V	VI	VII	VIII	IX	X	XI
1.	**Domestic**									
a)	Upto 100 Units	7154	452	3233.61	88.87	159.89		3482.37	486.77	-18.57%
b)	Above 100 and upto 300 Units	3740	614	2296.36	46.46	83.59		2426.41	648.77	8.52%
c)	Above 300 Units	1922	656	1260.83	23.88	42.96	2.40	1325.27	689.53	15.34%
	Total	**12816**		**6790.80**	**159.21**	**286.44**	**2.40**	**7234.05**		
2.	**NRS**									
	Upto 100 Units	1275	653	832.58	15.84	28.50		876.92	687.78	15.05%
	Above 100 Units	2278	675	1537.65	28.30	50.91	12.04	1604.82	704.49	17.85%
	Total	**3553**		**2370.23**	**44.14**	**79.41**	**12.04**	**2481.74**		
3.	**Public Lighting**	201	669	134.47	2.50	4.49		141.46	703.78	17.72%
4.	**Industrial**									
a)	Small Power	949	585	555.17	11.79	21.21		588.17	619.78	3.67%
b)	Medium Supply	1991	638	1270.26	24.73	44.50		1339.49	672.77	12.54%
c)	Large Supply	12245	646	7910.27	492.50	273.67	265.95	8410.49	686.85	14.89%
	Total	**15185**		**9735.70**	**529.02**	**339.38**	**265.95**	**10338.15**		
5.	**Bulk Supply**									
a)	HT	625	641	400.63	7.76	13.97	14.16	408.20	653.12	9.25%
b)	LT	39	668	26.05	0.48	0.87		27.40	702.56	17.52%
	Total	**664**		**426.68**	**8.24**	**14.84**	**14.16**	**435.60**		
6.	**Railway Traction**	151	675	101.93	1.88	3.37	4.58	102.60	679.47	13.66%
7.	**Common Pool**	312		145.70		6.97		152.67		
8.	**Outside State**	54		5.62		0.00		5.62		
9.	**AP**	10264	458	4700.91		229.40		4930.31	480.35	-19.65%
10.	**Total**	**43200**		**24412.04**	**744.99**	**964.30**	**299.13**	**25822.20**	**597.81**	

7.3.3 The cross subsidy levels based on the energy sales determined for FY 2015-16 at revised tariffs, in percentage terms, are brought out in Column XI of Table 7.2.

7.3.4 The Hon'ble APTEL in its judgement dated 17.12.2014 in Appeal No. 142 of 2013 and 168 of 2013 has directed the Commission to show the cross-subsidy for each category of consumer with respect to voltage wise cost of supply in the next tariff order. In compliance to the judgement of the Hon'ble APTEL, the cross-subsidy level for each category of consumer with respect to voltage wise cost of supply is shown in Appendix II, Volume-I.

7.4 GoP Subsidies

7.4.1 After determining the ARR and tariff for FY 2015-16, the Commission in its D.O. letter No. 96/PSERC/T-185 dated 06.04.2015 (Appendix – III) solicited the views of GoP regarding its intention to extend subsidy to any consumer or class of consumers under Section 65 of the Act. The said letter indicated the implications if GoP continues its present policy of subsidizing AP consumers, SC DS consumers and Non-SC BPL DS consumers as under:

(a) Subsidy for FY 2014-15

In the Tariff Order for FY 2014-15, the Commission approved AP consumption of 9749 MU for FY 2014-15, whereas the Commission has approved 10264 MU in the review for FY 2014-15. As such, the difference of ₹234.84 (515 MU x 456 paise) crore of subsidy for FY 2014-15 is payable by GoP.

(b) Subsidy for FY 2015-16

AP Consumption: In its ARR for FY 2015-16, PSPCL has projected AP consumption of 11374 MU, against which the Commission has determined 10264 MU in para 4.1.3 of this Tariff Order. The revenue from AP consumption of 10264 MU @ 458 paise/unit works out to ₹4700.91 crore.

Meter Rentals: In addition, subsidy of ₹9.00 crore on account of meter rentals in respect of AP consumers is also payable by the GoP for FY 2015-16. Accordingly, total AP subsidy of ₹4709.91 (4700.91+9.00) crore will be payable by GoP in respect of AP consumers for FY 2015-16.

Scheduled Caste Domestic Supply (SC DS) consumers: PSPCL in the ARR of FY 2015-16 has claimed subsidy of ₹875.00 crore, inclusive of ₹22.00 crore of meter rentals. PSPCL has claimed the subsidy taking into account the existing tariff rate of 456 paise per unit, whereas the Commission has reduced the tariff for first slab of DS Category to 452 paise per unit. The Commission had determined subsidy of ₹616.14 crore, inclusive of meter rental of ₹20.63 crore for SC DS category for FY 2014-15 in the Tariff Order for FY 2014-15. The Commission is of the view that the subsidy on this account may not be as claimed by PSPCL in the ARR since the tariff has been decreased from 456 paise per unit to 452 paise per unit, which may compensate for increase in consumption of SC DS consumers in FY 2015-16.

Accordingly, the Commission determines subsidy of ₹616.14 crore, inclusive of meter rentals of ₹20.63 crore for SC DS category consumers.

Non-SC Below Poverty Line (BPL) DS consumers: PSPCL has claimed subsidy of ₹59.00 crore, inclusive of meter rentals of ₹2.00 crore for FY 2015-16, taking into account the existing tariff rate of 456 paise per unit, whereas the Commission has reduced the tariff for first slab of DS to 452 paise per unit. The Commission had determined subsidy of ₹38.72 crore, inclusive of meter rentals of ₹2.00 crore for Non-SC Below Poverty Line (BPL) DS consumers for FY 2014-15 in the Tariff Order for FY 2014-15. The Commission is of the view that the subsidy on this account may not be as claimed by PSPCL in the ARR since the tariff has been decreased from 456 paise per unit to 452 paise per unit, which may compensate for increase in consumption of Non SC BPL consumers, in FY 2015-16.

Table 7.3: Subsidy payable by Govt. of Punjab to PSPCL during FY 2015-16

(₹ crore)

	AP	SC DS	Non-SC DS BPL	Total
FY 2014-15				
Additional Subsidy payable by GoP for FY 2014-15	234.84	0.00	0.00	234.84
FY 2015-16				
Subsidy payable by GoP for FY 2015-16	4709.91	616.14	38.72	5364.77
Total				**5599.61**

The subsidy of ₹5599.61 crore for FY 2015-16 required to be paid in advance in 12 monthly instalments at the rate of ₹466.63 crore per month from April, 2015 to October, 2015 and ₹466.64 crore per month from November, 2015 to March, 2016.

Further, any change in Fuel Cost Adjustment from the level approved by the Commission is to be passed on to the consumers as FCA as per Punjab State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005. The subsidy payable by GoP on account of levy of Fuel Cost Adjustment Surcharge, if any, will be in addition to the amount worked out above.

Change in subsidy for FY 2012-13, FY 2013-14 and FY 2014-15, if any, will be determined at the time of true-up of these years.

GoP in its letter no. 980 dated 17.04.2015 (Appendix IV, Volume I) has conveyed approval for the payment of subsidy of ₹5599.61 crore. Keeping in view the decision of GoP, the Commission has incorporated the same in the tariff structure in Table 7.1.

7.4.2 GoP is also liable to pay/adjust the balance recoverable/surplus amount alongwith carrying cost on it, if any, on account of less/surplus subsidy paid by it against amount of subsidy determined in the Tariff Order for FY 2014-15.

7.5 Renewable Energy

7.5.1 Background

The Act, under Section 86 (1)(e) mandates the Commission to promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee. The National Electricity Policy and Tariff Policy formulated under the Act further provide that the share of electricity from non-conventional sources as specified by State Electricity Regulatory Commissions (SERCs) need to be progressively increased and such procurement by Distribution Licensees for future requirements shall be done, as far as possible, through competitive bidding process under section 63 of the Act.

In order to develop & promote new and renewable sources of energy (NRSE) based technologies, GoP notifies the NRSE Policy from time to time. Presently, NRSE Policy 2012 is in vogue.

7.5.2 Tariff for Purchase of Electricity from Renewable Sources of Energy

The Commission has adopted the Central Electricity Regulatory Commission (Terms & Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012 with State specific modifications in its Order dated 19.07.2012 in petition no. 35 of 2012 (suo motu). Every year, the Commission determines the generic levellised tariff for purchase of electricity from various types of renewable energy power projects to be commissioned during the year. For FY 2012-13 and FY 2013-14, such tariff was determined by the Commission in its ibid Order dated 19.07.2012 and Order dated 25.06.2013 in petition no. 37 of 2013 (suo motu) respectively. For FY 2014-15, the Commission determined the generic tariff vide its Order dated 05.09.2014 in petition no. 42 of 2014 (suo motu) and also adopted, with State specific modifications, the First Amendment dated 18.03.2014 to the aforementioned CERC Regulations. For FY 2015-16, the Commission shall determine the generic tariff in due course. The tariff payable to the existing and new renewable energy generating stations is governed as per the Terms and Conditions of their respective Power Purchase Agreements (PPAs).

7.5.3 **Renewable Purchase Obligation (RPO)**

The Commission notified the Punjab State Electricity Regulatory Commission (Renewable Purchase Obligation and its compliance) Regulations, 2011 (RPO Regulations) on 03.06.2011, wherein Renewable Purchase Obligation (RPO) for the years 2011-12 to 2014-15, both Non-Solar & Solar, was specified for compliance by the Obligated Entities. As per the Regulations, the RPO can be complied with by the Obligated Entity by purchasing electricity from renewable sources of energy or alternatively Renewable Energy Certificates (RECs) from the Power Exchange(s) or a combination of both. However, in case the Obligated Entity fails to comply with the obligation to purchase the required percentage of electricity from renewable sources of energy or the RECs, it is liable for proceedings under section 142 of the Act.

In order to ensure that the RPO so specified by the Commission in the aforementioned Regulations is realistically achievable, it was finalized after consultative discussion with Punjab Energy Development Agency (PEDA) and PSPCL on the renewable energy capacity likely to be added/installed in the State and committed to PSPCL. While specifying the RPO, the Commission was mindful of the fact that the State of Punjab is not sufficiently endowed with various renewable energy resources except biomass, which is not fully available for power generation as the same is also used by other Industrial/Commercial establishments such as brick-kilns, paper/pulp industry, textile mills etc. Accordingly, the RPO was specified by the Commission at an achievable level.

7.5.4 **RPO for FY 2015-16**

In the review meeting for RPO compliance and other issues relating to renewable energy held by the Commission with PSPCL and PEDA on 09.01.2015, the urgency for specifying the RPO for FY 2015-16 and the years thereafter was emphasized. PSPCL submitted that while finalizing the RPO, the actual RE capacity addition during the last few years be kept in view, which was rather less as compared to the projections by PEDA. PEDA stated that information/inputs for specifying the RPO will be submitted in consultation with PSPCL. The Commission initiated the due process for specifying the RPO for FY 2015-16 onwards and invited comments/suggestions through Public Notice on the Staff Paper prepared for the purpose. PEDA has informed that Central Government is likely to enhance the RPO to 15%, out of which Solar RPO is proposed to be 10.50% by 2022, as against the current provision of 3% Solar RPO compliance by 2022 in the Tariff Policy. The Commission will specify the RPO for compliance by the obligated entities for FY 2015-16 onwards, after completion of the due process.

Renewable Capacity addition

The renewable energy capacity available to PSPCL as on 31.03.2015 and projections for capacity to be added during FY 2015-16 for meeting the RPO as per information furnished by PEDA vide letter no. 104 dated 09.04.2015 is given in Table 7.4.

Table 7.4: Existing Renewable Energy Capacity and Projections for FY 2015-16

	Biomass (MW)	Non-fossil fuel Cogeneration (MW)	Small Hydro (MW)	Solar (MW)	Biogas+ Waste to Energy (MW)	Total (MW)
I	**II**	**III**	**IV**	**V**	**VI**	**VII**
Upto 31.03.2015	72.50	155	132	224.27	1 (0+1)	584.77
Projections for FY 2015-16	46	13.70	34.35	330	1 (1+0)	425.05

The Commission directs PSPCL to comply with the RPO for FY 2015-16, to be specified by the Commission after completion of the due process.

7.5.5 Pooled Cost of Purchase of Electricity of PSPCL

The Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 provide for determination of 'Pooled Cost of Purchase' of electricity, for the purpose of eligibility for a generating company engaged in generation of electricity from renewable sources of energy to apply for registration for issuance of and dealing in renewable energy certificates. The ibid CERC Regulations, under Regulation-5 for 'Eligibility and Registration for Certificates', define the 'Pooled Cost of Purchase' as hereunder:

> *'Pooled Cost of Purchase' means the weighted average pooled price at which the distribution licensee has purchased the electricity including cost of self generation, if any, in the previous year from all the energy suppliers long-term and short-term, but excluding those based on renewable energy sources, as the case may be.'*

As per the ibid CERC Regulations, a generating company engaged in generation of electricity from renewable sources of energy, on fulfilling the conditions specified there-under, one of them being to sell the electricity generated to the Distribution Licensee (PSPCL) of the area in which it is located, at a price not exceeding the pooled cost of purchase of the distribution licensee, shall be eligible to apply for registration for issuance of and dealing in Renewable Energy Certificates.

Accordingly, the Commission has determined the 'Pooled Cost of Purchase' (APPC) as ₹3.84 per kWh. This 'Pooled Cost of Purchase', based on the data for FY 2014-15, will be applicable during FY 2015-16.

7.6 Separate Tariff for each Function

7.6.1 The Hon'ble APTEL decided Appeal Nos. 245, 176, 237 and 191 of 2012 by common judgement dated 12.09.2014. The findings of the Hon'ble APTEL on the issue of non-segregation of cost of generation from distribution (Para 88 (iii)) are as under: -

"Non-segregation of cost of Generation from Distribution: We find that the State Commission has determined the variable charges of different thermal power stations after considering the operational norms viz. norms for Station Heat Rate, specific fuel consumption, auxiliary consumption, etc., as per its Regulations. However, the State Commission has determined the Return on Equity, interest on loan, employees cost, A&G expenses, Repair and Maintenances expenses, etc., considering the combined assets/expenditure of the generation and distribution assets. The State Commission in paragraph 6.6.1 of the impugned order has stated that the segregation of ARR for FY 2012-13 of PSPCL into generation and distribution functions has been carried out on the basis of information furnished by PSPCL in its letter dated 30.3.2011 and audited accounts of FY 2009-10 of the erstwhile Board since audited accounts for FY 2010-11 are not provided by PSPCL. It is indicated that ROE is bifurcated proportionally on the value of fixed assets of each function. The State Commission then determined the fixed cost of each generating station based on the data provided by PSPCL. We have observed some discrepancies in the bifurcated function-wise expenses as pointed out in paragraph 76. We feel that the State Commission should have determined the fixed charges for the generating stations separately. The State Commission as per its Regulations has to determine the station-wise generation tariff. Apportioning of the total fixed cost of PSPCL in some proportion to different functions of PSPCL is not in consonance with the Regulations. FY 2012-13 is

already over and is due for truing up. Therefore, the State Commission is directed to correct the discrepancies as stated above and true up station-wise/function-wise expenditure after prudence check. This issue is decided in favour of the Appellant."

The Commission initiated suo-motu proceedings vide Petition No. 56 of 2014 to comply with the directions of the Hon'ble APTEL and called upon the parties to file written submissions with regard to the directions of the Hon'ble APTEL. Siel Chemical Complex, Mandi Gobindgarh Induction Furnace Association (Regd.), Open Access Users Association and PSPCL filed their written submissions. The Commission in Chapter 2 of this Tariff Order has decided not to carry out the true up of FY 2012-13. As such, the Commission is not determining the station-wise/function-wise expenditure for FY 2012-13 in this Tariff Order as ordered by the Hon'ble APTEL in its judgement dated 12.09.2014 in Appeal Nos. 176, 191, 237 and 245 of 2012. Further, the judgement of the Hon'ble APTEL dated 12.09.2014 has been stayed by the Hon'ble Supreme Court as per its Order dated 27.03.2015 in Civil Appeal No(s). 2151-2152/2015.

The Commission in its letter no. 11488 dated 01.10.2014 requested PSPCL as under, in the matter of determining separate tariffs for generation and distribution:

"The Commission is to determine the separate tariffs for Generation and Distribution (Wheeling and Retail Supply) of electricity as per Electricity Act and the Tariff Regulations notified by the Commission. Further as per Orders of Hon'ble APTEL dated 11.09.2014, the Commission has been directed to determine the separate tariffs for Generation and Distribution. As such, the audited details of costs/figures be filed separately for Generation (Plant wise), Wheeling and Retail Supply Business so that Commission could determine the Generation Tariff (Plant wise Fixed/Capacity charges and Energy charges), wheeling charges and retail supply charges separately. The existing performae may be used for this purpose and for any left out information, additional performae may be designed at your level."

PSPCL commented as under in its ARR for FY 2015-16:

"The detail of segregated cost/figures for generation, transmission and distribution for the FY 2012-13 has already been supplied vide this office Memo no. 920/924/A-45 dated 27th October, 2014. So far as the information for FY 2013-14 & FY 2014-15 is concerned, it is intimated that the accounts

for FY 2013-14 is under preparation. Thereafter the accounts for the year FY 2014-15 will be prepared."

PSPCL was again asked to supply the information in the matter vide Commission's letter no. 13250 dated 01.12.2014, as under:

"Cost audit report and the compliance report duly authenticated and signed by the cost accountant in the specified formats (Performae A to H) as per the notification of Ministry of Corporate Affairs dated 07.12.20111 may be furnished. Separate plant-wise statement in performa C as per notification for each type of generation viz Hydroelectric, Thermal, Atomic etc. and for captive consumption, power sold within country and power exported may also be furnished."

PSPCL vide its letter no. 1229 dated 09.12.2014 commented as under:

"PSPCL submits that the firm of professional Cost Accountants has already been appointed and work regarding Cost Audit of the cost accounting records for FY 2012-13 had already being in process and will get finalized as early as possible. However, the Cost Accounting record and Cost Audit Report for FY 2011-12 has been finalised and Cost Audit Report submitted by Cost Auditor is put up to Board of Directors vide Agenda No. 196/CC/528 dated 7th October, 2014. PSPCL will submit the report as soon as it receives."

PSPCL has not supplied the station-wise/function-wise figures for FY 2015-16. Further, Regulation 44 of the PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 states as under:

"Special Provisions

During the period, the PSEB remains an integrated utility, the Commission may waive any of the provisions of these Regulations in any matter if, in the opinion of the Commission, it is impracticable or inexpedient to proceed as per these Regulations. In such a situation, after recording its reasons, the Commission may adopt any other approach which is reasonable and is consistent with the overall approach of these Regulations."

PSPCL has submitted in the ARR petition that it is one of the 'Successor Companies' of the erstwhile Punjab State Electricity Board (Board) duly constituted under the Companies Act, 1956 on 16.04.2010 after restructuring of the Board by Govt. of Punjab vide Notification No. 1/9/08-EB(PR)/196 dated 16.04.2010, under the "Punjab Power Sector Reform Transfer Scheme". As per the transfer scheme, the erstwhile Punjab State Electricity Board (the predecessor) has been unbundled into two companies i.e. POWERCOM and TRANSCO. The POWERCOM has been named as Punjab State Power Corporation Limited and TRANSCO has been named as Punjab State Transmission Corporation Limited. As per the transfer scheme, the Govt. of Punjab has segregated the "Transmission Business of erstwhile Punjab State Electricity Board, concerning the transmission of electricity and the State Load Dispatch Center (SLDC) function. Hence, PSPCL is left with the Distribution, Generation and allied activities of the erstwhile PSEB. As per the PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, [Regulation – 1(3)(k)], PSPCL is considered as an integrated utility since it is currently engaged in multiple functions, namely, Generation, Trading and Distribution of electricity. Now, since PSPCL is an integrated utility engaged in multiple functions of Generation, Trading and Distribution of electricity, it is impracticable to proceed as per PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, in the matter of determination of station-wise/function-wise expenditure prudently and as such, in view of provisions of Regulation 44 of the ibid Regulations, the Commission decides to determine the station-wise/function-wise expenditure of PSPCL for FY 2015-16 on the same methodology as adopted by the Commission in its earlier Tariff Orders.

7.6.2 PSPCL in the ARR for FY 2015-16, furnished the Annual Accounts for FY 2012-13 signed by Statutory Auditor alongwith Audit Report of Statutory Auditor and stated that the CAG Audit Report is still awaited. PSPCL vide its letter no. 1229 dated 09.12.2014 intimated that audit certificate from CAG is still awaited and will be submitted to the Commission as and when received from CAG. Again, PSPCL vide its letter no. 1246 dated 15.12.2014 intimated that CAG Audit Report will be submitted to the Commission likely by 31.01.2015. PSPCL has submitted CAG Audit Report on 27.03.2015 vide its letter no. 407/ARR/DTR/Dy.CAO/244 dated 27.03.2015. The Commission is not considering CAG Audit Report submitted by PSPCL on 27.03.2015, as the Commission had already finalised the contents/ figures of the Tariff Order by the time PSPCL submitted CAG Audit Report. Further, the Audited Accounts for FY 2013-14 have not been submitted by PSPCL. As such, the Commission decides to determine the separate tariff for generation and distribution functions on the basis of information available with the Commission, which was supplied by PSPCL vide letter nos. 504 dated

27.03.2014 & 523 dated 02.04.2014 during the processing of ARR for FY 2014-15.

7.6.3 In this Order, the Commission is determining separate tariffs for generation and distribution functions of PSPCL. The segregation of the ARR for FY 2015-16 of PSPCL into generation and distribution functions has been carried out based on the information furnished by PSPCL in its letter nos. 504 dated 27.03.2014 & 523 dated 02.04.2014 and the Audited Annual Accounts of FY 2011-12 of PSPCL, while processing the ARR for FY 2014-15, in view of position brought out in paras 7.6.1 and 7.6.2.

7.6.4 The allocation under each head (generation and distribution) is detailed at Annexure-V, Volume-II and RoE is bifurcated proportionately on the value of fixed assets of each function.

In addition, the consolidated gap & carrying cost of gap for FY 2014-15, has been computed in proportion to the revenue requirement of each function.

7.6.5 The segregated ARR on the above basis is given in Table 7.5. The generation function has been further divided into thermal and hydel taking into account the fact that the Regulations for determining the tariff for these are different.

Table 7.5: Segregation of ARR for FY 2015-16

(₹ crore)

Sr.No	Item of expense	Generation			Distribution	Total
		Hydel	Thermal	Total		
I	II	III	IV	V	VI	VII
1.	Cost of fuel	0.00	5160.21	5160.21	0.00	5160.21
2.	Cost of Power purchase	0.00	0.00	0.00	11147.06	11147.06
3.	Employee cost	348.73	642.07	990.80	3550.01	4540.81
4.	R&M expenses	29.61	196.72	226.33	214.95	441.28
5.	A&G expenses	4.57	10.58	15.15	129.79	144.94
6.	Depreciation	263.34	185.50	448.84	315.79	764.63
7.	Interest charges	542.80	592.66	1135.46	697.69	1833.15
8.	Return on Equity	268.18	304.18	572.36	370.26	942.62
9.	Provision for DSM fund	0.00	0.00	0.00	10.00	10.00
10.	Charges payable to GoP on Power from RSD	0.00	0.00	0.00	0.00	0.00
11.	Transmission charges payable to PSTCL	0.00	0.00	0.00	967.62	967.62
12.	**Total revenue requirement**	**1457.23**	**7091.92**	**8549.15**	**17403.17**	**25952.32**
13.	Add: Consolidated Gap upto FY 2014-15	-3.01	-14.65	-17.66	-35.94	-53.60
14.	Add Carrying Cost of Revenue Gaps	-1.52	-7.40	-8.92	-18.17	-27.09
15.	**Total of Consolidated Gap and carrying cost (13+14)**	**-4.53**	**-22.05**	**-26.58**	**-54.11**	**-80.69**
16.	**Gross revenue requirement (12+15)**	**1452.70**	**7069.87**	**8522.57**	**17349.06**	**25871.63**

7.7 Generation Tariff

7.7.1 PSERC Tariff Regulations specify that the generation tariff will have the same components as laid down in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2004, as amended by CERC from time to time. CERC by its notification dated 21st February, 2014 has issued the Tariff Regulations for generation and transmission projects for the period 2014-19 by repealing its earlier Tariff Regulations.

7.7.2 As per CERC Regulations, generation tariff shall comprise of:

(i) Annual Fixed Charges (AFC), which include return on equity, interest on loan capital, depreciation, interest on working capital and O&M expenses;

(ii) Energy (variable) charges for recovery of Fuel Cost (primary and secondary fuel).

These charges are recoverable on the basis of norms for thermal plants and hydel plants and are specific for each power plant.

7.7.3 Full AFC is payable on achievement of normative plant availability as specified in CERC Tariff Regulations, 2014.

7.7.4 The Commission has assessed the plant wise AFC for FY 2015-16 on the basis of data provided by PSPCL during the processing of ARR of FY 2014-15 as discussed in para 7.6.2, as reproduced at Annexure-VI, Volume-II whereas proportion of generation cost under each head is given in Annexure-VII, Volume-II. Accordingly, the total revenue requirement for each plant is computed and indicated in Annexure-VIII, Volume-II. The plant wise AFC determined for FY 2015-16 is given in Table 7.6.

Table 7.6 - Annual Fixed Charges - Generation for FY 2015-16

Sr. No.	Plant	Annual/Fixed Capacity Charges (₹ crore)	Net Generation (MU)	Fixed Charges (Paise/unit)
I	II	III	IV	V
A	**Thermal Plants**	**1909.66**		
1.	GNDTP	553.54	2410	229.69
2.	GGSSTP	735.89	8463	86.95
3.	GHTP	620.23	6712	92.41
B	**Hydel Plants**	**1452.70**		
1.	Shanan	35.54	434	81.90
2.	UBDC	112.77	322	350.21
3.	RSD	860.03	1551	554.50
4.	Mukerian	128.39	1399	91.77
5.	Anandpur Sahib	85.92	722	119.01
6.	Micro Hydel	1.66	8	207.37
7.	Bhakhra Left Bank and Right Bank	95.73		*
8.	Beas & Extension.	132.66		*

** AFC for hydel plants at Sr.No (B) 7 & 8 are determined by BBMB.*

Accordingly, the total AFC recoverable in the case of thermal and hydel plants are:

i) Thermal - ₹1909.66 crore

ii) Hydel - ₹1452.70 crore

7.7.5 The AFC for both thermal and hydel plants will be payable on achievement of target availability as discussed in para 7.7.3.

7.7.6 The variable (energy) charges for a thermal plant are the primary fuel cost and secondary fuel cost are computed as cost per unit of ex-bus energy (energy sent out). As per approved ARR for FY 2015-16, the total fuel cost for all the three thermal plants is ₹5160.21 crore. These costs have been worked out plant wise and the variable charges per unit of energy for each plant are given in Table 7.7.

Table 7.7: Variable (Energy) Charges for FY 2015-16

Sr. No.	Particulars	GNDTP	GGSSTP	GHTP
I	II	III	IV	V
1.	Fuel cost (₹ crore)*	717.49	2597.87	1844.85
2.	Net Generation (MU)	2410	8463	6712
3.	Variable charge per unit sold (Paise/kWh)	297.71	306.97	274.86

** The plant wise fuel cost has been taken as approved by the Commission in para 4.7.*

7.8 Total charges for Generating Plants

The total charges (fixed and variable) for generating plants as determined by the Commission are given in Table 7.8.

Table 7.8: Total energy charges for FY 2015-16

Sr. No.	Plant	Fixed Charges (Paise/unit)	Variable Charges (Paise/unit)	Total Charges (Paise/unit)
I	II	III	IV	V = (III+IV)
A	**Thermal Plants**			
1.	GNDTP	229.69	297.71	527.40
2.	GGSSTP	86.95	306.97	393.92
3.	GHTP	92.41	274.86	367.27
B	**Hydel Plants**			
1.	Shanan	81.90	-	81.90
2.	UBDC	350.21	-	350.21
3.	RSD	554.50	-	554.50
4.	Mukerian	91.77	-	91.77
5.	Anandpur Sahib	119.01	-	119.01
6.	Micro Hydel	207.37	-	207.37

7.9 Distribution / Wheeling Charges

7.9.1 The gross revenue requirement for distribution for FY 2015-16 as per Table 7.5 is ₹5234.38 crore (excluding the power purchase cost and transmission charges). As per Tariff Regulations of the Commission, the distribution capacity for working out the wheeling charges shall be the sum of power imported at each interface point of exchange of power at electrical boundary of distribution licensee and generation from captive plants and cogeneration plants (to the extent fed into the distribution system) and plants injecting electricity generation from renewable sources of energy located in the area of such licensee. PSPCL intimated the total distribution capacity for working out the wheeling charges for FY 2015-16 as 11732 MW. The Commission has, however, worked out the total distribution capacity of PSPCL for FY 2015-16 as 12356.54 MW (net of transformation losses and auxiliary consumption). The details regarding determination of wheeling charges are given in Table 7.9.

Table 7.9: Wheeling Charges for FY 2014-15

a)	Energy requirement at the distribution periphery (as per Table 4.5 of the Tariff Order).	48626 MU
b)	Distribution capacity determined by the Commission.	12356.54 MW
c)	Gross revenue requirement for distribution (excluding power purchase cost and charges payable to PSTCL, as per Table 7.5)	₹5234.38 crore
d)	Wheeling charges for using distribution network (c x 1000/a)	108 paise/kWh
e)	Wheeling charges per MW/month [(c x 10^7)/(b x 12)]	₹353010/MW/Month

Accordingly, the Commission determines wheeling charges as ₹353010/MW/Month.

7.10 Open Access Charges

7.10.1 The Commission, in exercise of powers conferred under Section 42 read with Section 181 of the Electricity Act, 2003 (36 of 2003) and all other powers enabling the Commission in this behalf, based on the 'Statement of Reasons' issued vide No. PSERC/Secy./Reg.156 dated 29th June, 2011, framed the Punjab State Electricity Regulatory Commission (Terms and Conditions for Intra-state Open Access) Regulations, 2011 and notified the same vide Notification, the 1st July, 2011. These Regulations were amended vide Notification dated 4th May, 2012, wherein existing Regulation 25(5) was substituted as under:-

"25(5) Long term, Medium term and short term Open Access customers availing supply at 220 kV, 132 kV, 66 kV, 33 kV or 11 kV, in addition to transmission charges, shall be liable to pay wheeling charges determined by the Commission as per the Tariff Order applicable for the year".

The Commission passed the Tariff Order dated 16.07.2012 for FY 2012-13 for PSPCL, and made wheeling charges applicable for Open Access customers as per amended Regulation 25 (5). Some Open Access customers filed Appeals, being No(s) 176, 191, 237, 245, all of 2012 against Tariff Order for FY 2012-13 and Appeal No(s) 142 and 168, both of 2013 against Tariff Order for FY 2013-14 challenging the wheeling charges payable by all Open Access consumers irrespective of the voltage level at which supply was being taken. Hon'ble APTEL decided Appeal No(s) 245, 176, 237 and 191 of 2012 by common Judgment dated 12.09.2014.

Findings of Hon'ble APTEL on the issue (Para 88 (i)) are as under:

> *"Wheeling Charges: We feel that the wheeling charges have been determined by the State Commission in contravention to the provisions of the Act, Tariff Policy, National Electricity Policy and its own Regulations. Therefore, we have no option but to set aside the impugned Order in respect of determination of wheeling charges applicable to Open Access customers for the period 7.5.2012 to 31.3.2013 with directions to re-determine the wheeling charges applicable to Open Access customers as per the above findings within 90 days of communication of this Judgment and pass on the consequential relief to the Appellants and other Open Access customers. The retrospective revision of the inter-state transmission charges and wheeling charges for short term inter-state Open Access transactions by Open Access customers is also set aside as it is a contravention to the Inter-state Open Access Regulations of the Central Commission. Accordingly, this issue is decided in favour of Appellants".*

The Commission initiated suo-motu proceedings vide Petition No.56 of 2014 to comply with the directions of Hon'ble APTEL and called upon the parties to file written submissions with regard to the directions of Hon'ble APTEL. During hearing on 11.11.2014, PSPCL submitted copies of Memorandum of Appeal filed under Section 125 of the Electricity Act, 2003 before the Hon'ble Supreme Court against the Order dated 12.09.2014 of the Hon'ble APTEL. The Commission, after hearing PSPCL on 16.12.2014, closed the hearing of the petition and reserved the Order.

Hon’ble Supreme Court, in its Order dated 06.04.2015 had stayed the Judgment dated 12.09.2014 passed by Hon’ble APTEL.

Similarly, some consumers of PSPCL had filed Appeal No.142 and 168 both of 2013 and had challenged the Tariff Order dated 10.04.2013 for FY 2013-14 for PSPCL, interalia on the ground of levy of wheeling charges as determined in the said Tariff Order in terms of Open Access Regulation 25 (5) as amended in 2012 on the Open Access customers irrespective of the voltage at which the supply was taken. The findings of the APTEL dated 17.12.2014 on the issue in these Appeals are the same as in its Order dated 12.09.2014 in Appeal No(s) 176, 191, 237 and 245, all of 2012.

PSPCL filed Appeal before Hon’ble Supreme Court under Section 125 of the Electricity Act, 2003. Hon’ble Supreme Court had admitted the Appeals (Civil Appeal No(s) 2151-2152 of 2015) and had stayed the impugned judgment vide Order dated 27.03.2015.

Since both the judgments (dated 12.09.2014 and 17.12.2014) of Hon’ble APTEL on the issue of levy of wheeling charges on Open Access customers have been stayed by Hon’ble Supreme Court, the directions of Hon’ble APTEL vide these Judgments cannot be complied with in this Tariff Order. The wheeling charges in terms of Regulation 25(5) of Open Access Regulations as amended vide notification dated 4th May, 2012, shall continue to be payable by all Open Access customers.

7.10.2 The Hon’ble APTEL in its judgement dated 12.09.2014 in case of Appeal Nos. 245, 176, 237 and 191, all of 2012 has ordered as under (para 88(i)) in the matter of retrospective revision of the intra-State transmission charges and wheeling charges:

> *“………..The retrospective revision of the intra-State transmission charges and wheeling charges for short term inter-State open access transactions by the Open Access customers is also set aside as it is in contravention to the Inter-State Open Access Regulations of the Central Commission. This issue is decided in favour of the Appellants.”*

There is no such provision in the PSERC Tariff Regulations and PSERC Open Access Regulations. CERC Open Access Regulations are not applicable for open access transactions involving transmission system of the State and requiring payment of intra-State transmission charges and wheeling charges. The Commission is clearly bringing out in the Tariff Orders issued by it that the ARR of the utility covers the complete financial year and as such, the recovery of tariff has to be such that the total revenue requirement of the utility for a financial year is recovered in that year. Accordingly, the Commission decides to make the revised tariffs/charges, including transmission charges and wheeling charges for short term open access applicable from 1st April to 31st March of the financial year. However, the judgement of the Hon'ble APTEL dated 12.09.2014 has been stayed by the Hon'ble Supreme Court of India vide its Order 06.04.2015.

7.10.3 As per the Open Access Regulations notified by the Commission, the wheeling charges for FY 2015-16 are ₹353010/MW/Month.

7.10.4 The energy requirement at the distribution periphery as per Table 4.5 of this Tariff Order for FY 2015-16 is 48626 MU. On this basis, the wheeling charges for use of the distribution network are determined as 108 paise/kWh (97 paise/kVAh).

As per clause 25(5) of PSERC (Open Access) Regulations, 2011 (amended on 4th May, 2012), short- term Open Access customers availing supply at 220 kV, 132 kV, 66 kV, 33 kV or 11 kV, in addition to transmission charges determined separately in the Tariff Order for PSTCL for FY 2015-16, shall also be liable to pay wheeling charges (i.e. of 108 paise/kWh (97 paise/kVAh)) determined by the Commission as per the Tariff Order applicable for the year.

Transmission and Wheeling charges for wheeling of NRSE power for consumption within the State shall be levied @ 2% of the energy injected into the State Grid, irrespective of distance. In case of wheeling of NRSE Power outside the State, full transmission and wheeling charges shall be leviable.

For Long-term and Medium-term Open Access (OA) customers availing supply at 220 kV, 132 kV, 66 kV, 33 kV or 11 kV, wheeling charges shall be ₹353010/MW/Month of the contracted capacity.

7.10.5 As per clause 30(2) of PSERC (Open Access) Regulations, 2011, the Open Access customers shall bear Transmission & Distribution losses as under:

(i)	OA customers at 132/220 kV	2.5%
(ii)	OA customers at 66/33 kV	15% of distribution losses (13.55%), which works out to 2.03%, in addition to Transmission Loss of 2.5%.
(iii)	OA customers at 11 kV	40% of distribution losses (13.55%), which works out to 5.42%, in addition to Transmission Loss of 2.5%.

7.10.6 As per clause 26(2) of PSERC (Open Access) Regulations, 2011, the cross subsidy surcharge for various categories of consumers, for FY 2015-16, shall be as under:

Large supply	-	89 paise/kWh (85 paise/kVAh for Large Supply General Industry and 87 paise/kVAh for Large Supply PIU/Arc Furnace consumers)
Domestic supply	-	92 paise/kWh (85 paise/kVAh)
Non-Residential supply	-	107 paise/kWh (98 paise/kVAh)
Bulk supply	-	55 paise/kWh (52 paise/kVAh)
Railway Traction	-	82 paise/kWh (80 paise/kVAh)

7.10.7 In addition, other charges such as additional surcharge, operation charges, UI, reactive energy charges, shall be levied as per the Open Access Regulations/ Tariff Regulations notified by the Commission.

7.11 Date of Effect

The Commission notes that the ARR of PSPCL for FY 2015-16 covers the complete financial year. The recovery of tariff, therefore, has to be such that the total revenue requirement of PSPCL for FY 2015-16 is recovered in this period.

The Commission, therefore, decides to make the revised tariffs applicable from April 01, 2015 and the tariff structure determined above shall remain operative till March 31, 2016.

This Order is signed and issued by the Punjab State Electricity Regulatory Commission on this, the 5th day of May, 2015.

Date: May 05, 2015

Place: CHANDIGARH

Sd/-	Sd/-
(GURINDER JIT SINGH) MEMBER	(ROMILA DUBEY) CHAIRPERSON

Certified

Sd/-

Secretary
Punjab State Electricity Regulatory Commission,
Chandigarh.

APPENDIX- I

Minutes of the Meeting of State Advisory Committee of the Punjab State Electricity Regulatory Commission held on February 16, 2015

The meeting of the PSERC, State Advisory Committee was held in the office of Commission at Chandigarh on February 16, 2015 to discuss ARRs and Tariff Petitions for FY 2015-16 filed by PSPCL and PSTCL. The following were present:

1.	Ms. Romila Dubey Chairperson, PSERC	Ex-officio Chairperson
2.	Er. Gurinder Jit Singh Member, PSERC	Ex-officio Member
3.	Sh. H.S. Grewal, Addl. Director, F&S Pb. On behalf of Secretary, Food & Supplies and Consumer Affairs, GoP	Ex-officio Member
4.	Sh. Narinder Mehta, OSD/PR. On behalf of Secretary, Power, GoP	Member
5.	Sh. Jaspal Singh, Chief Engineer PAU, Ludiana	Member
6.	Sh. J.P. Singh, A.L.C. On behalf of Labour Commissioner Deptt. of Labour & Employment, GoP	Member
7.	Sh. Dinesh Gupta, Chairman, CII, Punjab State Council,	Member
8.	Sh. R.S. Sachdeva, Chairman, Sh. K.K.Singla, Advisor Power, PHDCCI, Punjab Committee,	Member
9.	Er. Aishvarya Sharma, AAE(Imp) On behalf of Director Agriculture	Member
10.	Sh. Vinod Bansal, Financial Advisor On behalf of Director/F&C, PSTCL	Member
11.	Er. K.L. Sharma, Director/Distribution, PSPCL	Member
12.	Er. Trilok Singh, Chief Engineer/ARR &TR PSPCL	Member
13.	Er. S.K. Anand, (Ex-Member, PSEB)	Member
14.	Prof. R.S.Ghuman, Chair Professor, Nehru SAIL Chair & Head Panchayati Raj Unit, CRRID	Member

15.	Sh. Pishora Singh, President, Bhartiya Kisan Union (EKTA)	Member
16.	Sh. Rakesh Sareen, Zonal Incharge REC, Panchkula	Member
17.	Sh. Bhagwan Bansal, Punjab Cotton Factory, Ginners Association	Member
18.	Shri Jagtar Singh, Director, Social Work & Rural Development Centre	Member
19.	Er. Suresh Kumar Gupta, (Ex-Member PSEB),	Member
20.	Sh.Surinder Singh On behalf of Chief Executive Officer, Punjab Energy Development Agency (PEDA)	Member
21.	Er. A.S.Pabla (Ex-Chief Engineer, PSEB), H.No.69, Phase-IIIA, S.A.S Nagar, Mohali.	Member
22.	Sh. Jarnail Singh, Executive Engineer On behalf of Director, Local Govt. Deptt., Punjab	Member
23.	Sh. Vijay Talwar, State Vice-President-cum-Co Chairman, National Power Committee, Laghu Udyog Bharti (Pb. Chapter)	Special Invitee
24.	Er. P.P. Garg, Secretary/PSERC	Ex-Officio Secretary

The Chairperson welcomed the members of State Advisory Committee and thanked everyone present for having spared time to attend the meeting. The Chairperson thereafter requested the members to offer their suggestions/comments on the Annual Revenue Requirements and Tariff Petitions for FY 2015-16 filed by PSPCL and PSTCL.

1. <u>Mr. Dinesh Gupta, Chairman, CII</u>

Mr. Gupta stated that the Hon'ble APTEL decision in respect of Wheeling Charges and Return on Equity be implemented by the Commission. Chairperson said that legal view on these issues shall be obtained before taking further action in the matter. Mr. Gupta further mentioned that PSPCL has given inflated figures in its ARR of FY 2015-16 which need to be examined by the Commission. Also, PSPCL projected high employee cost during FY 2015-16. The employee cost has been increased by 24% with respect to the previous year, this increase should not be more than 5%. He further pointed out that the cross subsidies should be linked with the cost of supply of different categories and not with the average cost of supply as it is increasing every year, instead of decreasing,. Also, there should be voltage-wise tariffs for industrial consumers. He requested that in some industries, meters with high multiplication factor should be changed as difficulties are being experienced in reading of the meters. He further requested that the Tariff Order for FY 2015-16 should be issued in time and some rebate/incentive should be given to the big industries.

2. Mr. R.S. Sachdeva & Er. K.K.Singla, PHD Chamber of Commerce

At the outset, Mr. Sachdeva pointed out that the Commission should take suo-moto notice in respect of difficulties experienced by the consumers in a regular manner. He pointed out that the rebate to be given to the consumers whose consumption increases more than the average of preceding three years, is not being given by PSPCL. Chief Engineer/ARR&TR stated that it will be given after March, 2015. On this, Chairperson directed PSPCL to act in the matter as per directions given in the Tariff Order. Mr. Sachdeva requested that Tariff Order should be issued within the timeframe, otherwise it should not be implemented retrospectively. He further requested that the new amendments in the Electricity Act proposed by Govt. of India should be kept in view by the Commission while deciding the issues. Chairperson informed that till the Act is amended, present Act will remain in force. Mr. Sachdeva further raised the issue that voltage wise different categories of industrial consumers be created for determining the tariff. The decision of the Hon'ble APTEL in case of Wheeling Charges & Return on Equity be implemented immediately. Mr. Sachdeva requested the Commission that during the winter season, there are no system constraints, so peak load restrictions should be removed during this period of the year and peak load exemption charges should be reduced. Due to low demand in the winter season, PSPCL is surrendering power, as such ToD rebate should be increased during this period to ₹2.50/kVAh. Chief Engineer/ARR&TR informed that only 26 MS consumers opted for ToD tariff during FY 2014-15. Mr. Sachdeva further requested that true-up for FY 2012-13 should be taken up only after CAG report and videography of all the public hearings on ARR be done by PSERC.

3. Prof. R.S. Ghuman, Chair Professor, CRRID

Prof. Ghuman appreciated and felicitated PSPCL for reducing T&D losses and hoped that in future also PSPCL will further reduce losses. He pointed out that the power purchase made by PSPCL is increasing year by year, which is not a good sign. It is to be seen how PSPCL is purchasing power from outside the State and from IPPs. He further mentioned that PSPCL's own generation has decreased from 52% to 49%, which means PSPCL has now become a junior partner in generation of power in the State. The amount of subsidy paid by the Govt. is also increasing every year and he wondered whether the Govt. can sustain subsidy at that level. The subsidies should be given to the poor and not to the rich. He further mentioned that industrialists are talking about subsidy to the agriculture sector but are silent on the benefits/incentives given to the industry by the Govt. Regarding PSTCL, he said that the revenue gap projected in the ARR for FY 2015-16 is not clear. Financial Adviser PSTCL, Mr. Vinod Bansal clarified the same.

4. Sh. Pishora Singh, President, Bharti Kisan Union (Ekta)

Mr. Pishora Singh stated that difficulty is experienced in release of new AP tube well connections by PSPCL due to stay order by the Green Tribunal or some other reasons which should be looked into by PSPCL. The compensation given by PSPCL for erection of transmission towers and poles in the land of consumers is only for the crop and not for the land under the towers. Er. S.K. Gupta also endorsed the view of Mr. Pishora Singh and said that as per rules, compensation should be given to the land owner in case of crop as well as for the land under the towers. Mr. Pishora Singh pointed out that certain transformers erected earlier individually by the consumers for release of AP connections are not being replaced by PSPCL. On this, Director/Distribution informed that PSPCL is replacing the transformers only of the make approved by PSPCL and not the others. To this reply of Director/Distribution, Mr. Pishora Singh stated that PSPCL should have informed this thing at the time of release of connection itself whether transformer is of approved make or not. However, Director/Distribution noted this point for further consideration. Mr. Pishora Singh further brought into notice that the cost of burnt meters installed outside the consumer premises is charged to the consumers. On this issue, Director/Distribution informed that the meters are burnt due to many reasons including overloading, internal fault etc.

5. **Sh. Jagtar Singh, Director Social Welfare & Rural Development Centre**

Sh. Jagtar Singh pointed out that PSPCL is asking for payment through draft in case billing amount is more than ₹5,000/-. On this, Member (G) informed that this limit has been increased to ₹10,000/- from ₹5,000/-. He suggested that subsidy should be given to the BPL families and there are instances where people are getting the benefit of BPL subsidies but they are above BPL which should be looked into by PSPCL.

6. **Mr. Bhagwan Bansal, Punjab Cotton Factory, Ginners Association**

Mr. Bansal pointed out that there should be two connections for the Cotton Ginning Industry from two different transformers. During off season, the main transformer should be switched off and supply should be given for light load from the smaller transformer. On this, Mr. S.K. Gupta stated that by doing so, the bigger transformer will be damaged when switched on after off season period due to absorption of moisture by it in idle state.

7. **Mr. Vijay Talwar, Laghu Udyog Bharti (Punjab Chamber)**

Mr. Talwar pointed out the decreasing strength of manpower of PSPCL in BBMB and suggested that full share of employees should be posted in BBMB by PSPCL even by carrying out more recruitment. There is a quota of 1550 employees in BBMB but PSPCL has deputed only 500 employees and is paying for 1550 employees. Thus around 1000 officials as per share in BBMB have not been posted, resulting in a loss of ₹120 crore per year because these 1000 employees which have not been posted are getting pay from PSPCL and BBMB is charging ₹120 crore extra. This needs prudent check by Hon'ble Commission.

Medium supply existing industrial consumers were allowed to use 100 kW which means 110 kVA at 0.9 power factor. He requested that the load category of MS consumers be extended upto 110 kVA.

He pointed out that artificial demand has been created by PSPCL during peak load hours. When the power is surplus in Punjab, peak load charges should be removed. During surplus power regime, ToD should be extended for whole of the year. A separate category for mixed load industries is required to be created in Schedule of Tariff.

PSPCL issued Commercial Circular in November 2014 stating the names of approved manufactures for supply of ToD meters. This circular clearly states that meters for private sales shall be available only after the supply of the meters to

Powercom, thus depriving the consumers to purchase their own ToD compliant meters. As per provisions of Section 55 of Electricity Act 2003 and meter regulations, it is mandatory for the distribution licensee to install a correct meter and to operate, maintain & regulate the meters. Thus it is very much clear that PSPCL was to receive the meters first then the meters could be available for private sale. Once PSPCL receive meters from manufactures it is mandatory for them to install at consumer premises so that consumers could avail the benefits of ToD tariff. These actions were probably to stop running of PSPCL own thermal plants for making purchase of electricity at higher rates.

Audit Report for FY 2012-13 has mentioned very serious observations and PSPCL should comply with those meticulously. PSPCL website is not being updated regularly which should be updated at least once in a month. He further suggested that PSERC is empowered u/s 86 of Electricity Act 2003, to suggest to Govt. of Punjab for reducing electricity duty for saving the industry from high input costs. For implementing the APDRP schemes, PSPCL is resorting to long power cuts, hence defeating the very purpose of use of surplus power by the consumers. Similarly, compulsory weekly off days are imposed on the industrial consumers by PSPCL again defeating the use of surplus power. PSPCL is charging ₹6,700 per pole for supplying poles to the consumers, whereas its manufacturing cost in its own workshop is ₹2,200/-.

He pointed out that there is 26% equity share of PSPCL in PANEM Coal Ltd. He asked for the reasons of sudden increase in coal rates by PANEM and the reasons of non supply of coal to PSPCL which resulted in shut down of power plants, heavy power cuts in Punjab resulting in huge loss of the State. Business of PSPCL with the equity out of PSPCL funds was to be disclosed and was to be scrutinized by the Hon'ble Commission. But perhaps this was not disclosed. Further, PSPCL has invested further equity of ₹391 crore by taking loan. This amount & interest there upon should not be allowed.

8. <u>Mr. Rakesh Sareen, Zonal Incharge, REC</u>

Mr. Sareen pointed out that the big revenue gap will affect the viability of PSPCL. The Commission should allow this gap to PSPCL.

9. <u>Er. S.K.Gupta, Ex. Member, PSEB</u>

Er. S.K. Gupta stressed that the role of Advisory Committee should be to deliberate on how to get PSPCL out of red and wipe out its revenue gap. PSPCL should be directed to come up with a policy paper and measures to wipe out its revenue gap. He further suggested that SLDC charges should be levied on open access consumers. For FY 2015-16, PSPCL is not giving any concrete proposal to meet coal supply shortage. In ARR for FY 2015-16, PSPCL has mentioned that PANEM coal will be supplied to GNDTP generating plant, but in reality, it will not be possible due to Hon'ble Supreme Court judgement on coal mines. The fixed cost of 3 upcoming IPPs in Punjab has put additional burden on the consumers of the State, because of power surrender by PSPCL. Punjab Govt. should give full subsidy to PSPCL and its ever increasing gap should be looked into by PSERC.

10. Er. Surinder Singh, Punjab Energy Development Agency

Er. Surinder Singh stated that on going Mukerian Hydel Plant be executed by PSPCL expeditiously to meet the target of non-solar NRSE power.

11. Er. A.S.Pabla, Ex. Chief Engineer, PSEB

Er. A.S.Pabla expressed his concern at failure of PSPCL to implement Energy Conservation/DSM projects. He pointed out that under Bachat Lamp Yojna, 30% more saving of energy will be there, when reduction in T&D losses and other factors are to be taken into consideration. He further highlighted the importance of implementing Demand Side Management projects since such measures not only result in energy saving but also save huge investment on system up-gradation. The implementation of Agriculture DSM also result in reduction of Govt. subsidy. It was proposed by him that PSPCL should be directed to ensure implementation of DSM projects in a time bound manner.

12. Er. S.K. Anand, Ex. Member PSEB

Er. Anand complimented PSPCL on their winning the CBIP award for the best performing power utility in the country. He reiterated that in the current scenario in the power sector, PSPCL is definitely one of the top performing utilities, having considerably brought down losses, primarily by controlling the commercial losses.

However, he pointed out the critical state of affairs in the distribution sector, which is suffering from all round poor standards, because of the lack of dedicated systems that ensure focus on the specific areas of design and construction, as well as operation and maintenance. Given the present system, there is almost a total lack of engineering inputs in this sector, and to make matters worse, there is a severe shortage of functionaries, across the board. He cautioned that unless the distribution organization is restructured on functional basis, in line with international practices, there is little chance of:

(i) Sustaining and reducing the commercial loss level, and targeting major reduction in technical losses.

(ii) Improving the quality of supply, which is far below the laid down standards (PSERC directions).

(iii) Implementing smart schemes like automation and SCADA systems. (PSERC directions).

(iv) Utilizing APDRP funds for well designed, sustainable and high priority schemes. (Most funds are being spent on non sustainable, low priority schemes).

(v) Addressing the problem of shortages of functionaries, created by an obsolete system.

He suggested that to carry out construction works as per the laid down standards and to implement planned preventive maintenance of the distribution system, dedicated design & construction (D & C) divisions and O&M divisions should be created in the field areas. He emphasized that these D&C and O&M divisions should be created in a definite time frame, on the same lines as that of the newly created commercial divisions.

13. <u>Er. K.L. Sharma, Director/Distribution PSPCL</u>

Director/Distribution stated that PSPCL is striving hard for giving better electricity supply and services to the consumers of the State. On a number of issues raised in the meeting, he mentioned that PSPCL is gradually improving on these fronts and losses are coming down and quality is being improved. Regarding purchase of power, merit order principle is followed by PSPCL, keeping in view the availability and demand of power. Regarding improving sub-transmission system, much has been done in the recent past with the result that only one power transformer has been damaged during the last year. He further stated that there is lot of scope for further improvement in the distribution system network and PSPCL is paying due attention to the same.

Chief Engineer/ARR&TR, PSPCL stated that financial grade rating of PSPCL has improved in the recent past, and own generation from its thermal generating plants has been projected in the ARR for FY 2015-16 as per the guidelines of CEA.

APPENDIX-II

Category-wise & Voltage-wise Cost of Supply and Cross Subsidy comparison with Cost of Supply: FY 2015-16			
Voltage level	**Consumer category**	**Cost of Supply**	**Cross subsidy level w.r.t. Cost of Supply**
kV		**Paise/unit**	
I	**II**	**III**	**IV**
220 kV	Industrial	4.84	34.92%
	Traction	4.86	39.71%
132 kV	Industrial	4.89	33.54%
	Bulk	4.84	33.47%
	Traction	4.92	38.01%
66 kV	Industrial	5.37	21.60%
	NRS	5.53	22.60%
	Bulk	5.34	21.91%
33 kV	Industrial	5.41	20.70%
	Domestic	5.85	14.02%
	Bulk	5.35	21.68%
11 kV	Industrial LS	5.76	23.09%
	Domestic	5.61	19.61%
	NRS	5.83	16.98%
	Bulk	5.89	11.38%
LT	Industrial MS	6.73	0.00%
	Industrial SP	7.01	-11.55%
	Domestic (0-100 Units)	6.05	-19.50%
	Domestic (Above 100 and upto 300 Units)	6.05	7.27%
	Domestic (Above 300 Units)	6.05	14.21%
	Agriculture	6.13	-21.70%
	NRS	6.48	8.33%
	Public Lighting	6.05	16.36%
	Bulk	6.00	17.17%

Punjab State Electricity Regulatory Commission
SCO : 220-221, Sector 34-A, Chandigarh-160 0..
Tel. : 0172-2648321, Fax : 0172-2664758

DO No. 96/PSERC/T-185
Dated : 6-4-2015

P.P. GARG
Secretary

The Punjab State Power Corporation Limited (PSPCL) and the Punjab State Transmission Corporation Limited (PSTCL) have filed with the Commission their Aggregate Revenue Requirements for the year 2015-16. The filing of PSPCL included proposal for review for FY 2014-15, based on revised estimates of the revenue requirement for its generation business and distribution business. The filing of PSTCL also included proposal for review for FY 2014-15, based on revised estimates of revenue requirement for its transmission business and SLDC Business. With their ARRs, both the Corporations i.e. PSPCL & PSTCL have filed Annual Audited Accounts for FY 2012-13, but without CAG Audit comments.

2. The Commission has finalized the Tariff Orders, both for PSPCL and PSTCL, after following the laid down procedure and completing all the requisite formalities. Combining the effect of determination of Annual Revenue Requirements for FY 2015-16, review for FY 2014-15 and considering revenue gap of previous years upto FY 2013-14 (for both PSPCL & PSTCL), total revenue gap up to FY 2015-16 has been worked out. As the gap determined is nominal, the Commission has decided not to raise tariff & MMC across the board and leave the gap uncovered. However, tariffs of some categories have been adjusted in view of social and regulatory requirements.

3. Subsidy for FY 2015-16:

a) In the past, the State Govt. has been fully subsidizing Agriculture Pump set (AP) consumers and a section of SC Domestic Supply (DS) and also Non-SC BPL DS consumers up to specified energy consumption.

b) The requirement of subsidy in FY 2015-16 will be as follows:

- For the year 2015-16, the Commission has determined subsidy of Rs. 4700.91 crore for AP Supply. After adding subsidy of Rs. 9.00 crore on account of meter rentals in respect of AP consumers, total subsidy payable by GoP works out to Rs. 4709.91 crore.
- Further, subsidy amounting to Rs. 654.86 crore, inclusive of meter rentals is payable on account of free supply up to 200 units per month to SC DS and Non-SC BPL DS consumers with a connected load up to 1000 watts.

Contd..P/2

- Accordingly, total subsidy inclusive of meter rentals for AP sector and SC DS & Non-SC BPL DS consumers payable by GoP is estimated to be Rs. 5364.77 crore for the year 2015-16.
- Additional subsidy payable for FY 2014-15 due to review of estimated AP consumption for FY 2014-15 has been worked out as Rs. 234.84 crore.
- Total subsidy payable by GoP to PSPCL during FY 2015-16 is estimated as Rs.5599.61 crore. The details are appended as Annexure-P1.

c) The subsidy of Rs. 5599.61 crore is required to be paid in advance in 12 monthly installments @ Rs. 466.63 crore per month from April 2015 to October 2015 and @ Rs. 466.64 crore per month from November 2015 to March 2016.

4. Further, any change in the Fuel Cost from the level approved by the Commission is to be passed on to the consumers as FCA. Punjab State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005 stipulate the procedure in Appendix-7, according to which any change in fuel cost would be passed on to the consumers on quarterly basis. The subsidy payable by GoP on account of levy of Fuel Cost Adjustment Surcharge, if any, will be in addition to the amount worked out in para-3 above.

In case, Government of Punjab is inclined to continue the present subsidy regime, it is requested that the commitment to pay the subsidy as detailed in the preceding paras and also the additional subsidy amount, if any, payable on account of Fuel Cost Adjustment during the year may kindly be conveyed.

Yours sincerely,

(P.P. Garg)

Encl: Annexure P-1

Sh. Sarvesh Kaushal, IAS,
Chief Secretary to Govt. of Punjab,
Chandigarh.

No. 97/PSERC/T-185
Dt. 6-4-2015

CC: along with enclosure to:

1. Sh. Anirudh Tewari, IAS,
   Secretary to Govt. of Punjab,
   Department of Power,
   Punjab Civil Secretariat - II, Sector-9,
   Chandigarh.

Annexure P-1

SUBSIDY PAYABLE BY GOP TO PSPCL FOR FY 2015-16

(Rs. crore)

	AP + Meter rentals	SC DS + Meter rentals	Non-SC DS BPL + Meter rentals	Total
Subsidy payable for FY 2015-16 for AP, SC DS and Non-SC BPL DS consumers at the revised tariff.	4700.91 9.00 4709.91	595.51 20.63 616.14	36.72 2.00 38.72	5364.77
Additional subsidy payable for FY 2014-15 due to review of estimated AP consumption for FY 2014-15				234.84
Total subsidy payable by GoP during FY 2015-16				5599.61

APPENDIX-IV

ਪੰਜਾਬ ਸਰਕਾਰ
ਬਿਜਲੀ ਤੇ ਗੈਰ ਰਵਾਇਤੀ ਊਰਜਾ ਵਿਭਾਗ
(ਊਰਜ਼ਾ ਸ਼ਾਖਾ)

ਸੇਵਾ ਵਿਖੇ

ਸਕੱਤਰ,
ਪੰਜਾਬ ਰਾਜ ਰੈਗੂਲੇਟਰੀ ਕਮਿਸ਼ਨ,
ਚੰਡੀਗੜ੍ਹ।

ਮੀਮੋ ਨੰ: 2/5/2015-ਓਸ2/ 980
ਮਿਤੀ, ਚੰਡੀਗੜ੍ਹ: 17/4/15

Subject: Regarding payment of subsidy for the year 2015-16.

ਉਪਰੋਕਤ ਵਿਸ਼ੇ ਤੇ ਆਪ ਦੇ D.O. No.96/PSERC/T-185 ਮਿਤੀ 6.4.2015 ਦੇ ਹਵਾਲੇ ਵਿੱਚ।

ਪੰਜਾਬ ਰਾਜ ਬਿਜਲੀ ਰੈਗੂਲੇਟਰੀ ਕਮਿਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ ਨੂੰ ਚਾਲੂ ਵਿੱਤੀ ਸਾਲ 2015-16 ਦੌਰਾਨ ਪਾਵਰਕਾਮ ਨੂੰ ਦਿੱਤੀ ਜਾਣ ਵਾਲੀ ਸਬਸਿਡੀ ਲਈ ਬਜਟ ਅਨੁਮਾਨ 2015-16 ਵਿੱਚ ਕੀਤੀ 5484 ਕਰੋੜ ਰੁਪਏ ਦੀ ਪ੍ਰੋਵੀਜ਼ਨ ਸਬਸਿਡੀ ਨੂੰ ਵਧਾ ਕੇ 5599.61 ਕਰੋੜ ਰੁਪਏ (Rs. 4944.75 Cr. for agriculture under head 2401 and 654.86 Cr. for domestic consumers under head 2801) ਕਰਨ ਦੀ ਪ੍ਰਵਾਨਗੀ ਦਿੱਤੀ ਜਾਂਦੀ ਹੈ। ਇਸ ਰਾਸ਼ੀ ਦੀ ਐਡਜਸਟਮੈਂਟ ਸੋਧੇ ਅਨੁਮਾਨ 2015-16 ਸਮੇਂ [illegible] ਕਰਾਉਣਾ ਯਕੀਨੀ ਬਣਾਇਆ ਜਾਵੇ।

3. ਇਹ ਪ੍ਰਵਾਨਗੀ ਵਿੱਤ ਵਿਭਾਗ, ਵਿੱਤ ਖਰਚਾ-4 ਸ਼ਾਖਾ ਦੇ ਪੱਤਰ ਨੰ: 7/1/44/2008-2ਵਿ.ਖ.4(ਪਾ.ਫ.)/283 ਮਿਤੀ 16.4.2015 ਅਨੁਸਾਰ ਜਾਰੀ ਕੀਤੀ ਜਾਂਦੀ ਹੈ।

ਉਪ ਸਕੱਤਰ ਪਾਵਰ

ਇਸ ਦਾ ਇੱਕ ਉਤਾਰਾ ਸੁਪਰਡੰਟ, ਵਿੱਤ ਵਿਭਾਗ, ਵਿੱਤ ਖਰਚਾ-4 ਸ਼ਾਖਾ ਨੂੰ ਉਹਨਾਂ ਦੇ ਪੱਤਰ ਨੰ: 7/1/44/2008-2ਵਿ.ਖ.4(ਪਾ.ਫ.)/283 ਮਿਤੀ 16.4.2015 ਦੇ ਹਵਾਲੇ ਵਿੱਚ ਸੂਚਨਾ/ਲੋੜੀਂਦੀ ਕਾਰਵਾਈ ਹਿੱਤ ਭੇਜਿਆ ਜਾਂਦਾ ਹੈ।

ਉਪ ਸਕੱਤਰ ਪਾਵਰ

ਸੇਵਾ ਵਿਖੇ

ਸੁਪਰਡੰਟ,
ਵਿੱਤ ਵਿਭਾਗ,
(ਵਿੱਤ ਖਰਚਾ-4 ਸ਼ਾਖਾ)

ਅੰ:ਵਿ:ਪੱ:ਨੰ:2/5/2015-ਓਸ2/ ਮਿਤੀ, ਚੰਡੀਗੜ੍ਹ:
ਪਿਠ ਅੰਕਣ ਨੰ:2/5/2015-ਓਸ2/ ਮਿਤੀ, ਚੰਡੀਗੜ੍ਹ:

ਉਪਰੋਕਤ ਦਾ ਇੱਕ ਉਤਾਰਾ ਹੇਠ ਲਿਖਿਆਂ ਨੂੰ ਸੂਚਨਾਂ ਅਤੇ ਲੋੜੀਂਦੀ ਕਾਰਵਾਈ ਹਿੱਤ ਭੇਜਿਆ ਜਾਂਦਾ ਹੈ:-

1. ਮਹਾਂਲੇਖਾਕਾਰ ਜਨਰਲ (ਏ.ਐਂਡ.ਈ) ਪੰਜਾਬ, ਚੰਡੀਗੜ੍ਹ।
2. ਮਹਾਂਲੇਖਾਕਾਰ ਜਨਰਲ (ਆਡਿਟ) ਪੰਜਾਬ, ਚੰਡੀਗੜ੍ਹ।
3. ਜ਼ਿਲ੍ਹਾ ਖਜ਼ਾਨਾ ਅਫਸਰ, ਪੰਜਾਬ ਚੰਡੀਗੜ੍ਹ।

ਉਪ ਸਕੱਤਰ ਪਾਵਰ