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

PETITION NO. 49 OF 2010

IN THE MATTER OF:

ANNUAL REVENUE REQUIREMENT

FILED BY THE PUNJAB STATE POWER CORPORATION LIMITED

FOR THE FINANCIAL YEAR 2011-12

PRESENT : Ms. Romila Dubey, Chairperson
Er. Virinder Singh, Member
Er. Gurinderjit Singh, Member

Date of Order: May 9, 2011

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 consumers of the State of Punjab for FY 2011-12. The ARR filed by the PSPCL, facts presented by the PSPCL in its various submissions, objections received by the Commission from consumer organizations and individuals, issues raised by the public in hearings held at Ludhiana, Chandigarh, Jalandhar and Bathinda, the responses of the PSPCL to the objections and observations of the Government of Punjab (GoP) in this respect have been considered. The State Advisory Committee constituted by the Commission

under Section 87 of the Act has also been consulted and all other relevant facts and material on record have been perused before passing this Order.

1.1 Background

The Commission has in its previous eight Tariff Orders determined tariff in pursuance of the ARRs and Tariff Applications submitted by the Punjab State Electricity Board (Board) for the years 2002-03 to 2006-07, 2008-09, 2009-10 and 2010-11. Tariff Order for the FY 2007-08 had been passed by the Commission in suo motu proceedings.

1.2 ARR for the FY 2011-12

PSPCL has filed the ARR Petition for FY 2011-12 on 30.11.2010. In this Petition, PSPCL has submitted that it is one of the 'Successor Entities' of the erstwhile Board duly constituted under the Companies Act, 1956, after unbundling 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). The Balance Sheet appended as Annexure A of the Transfer Scheme is provisional and the Final Transfer Scheme for PSPCL has not been notified yet. Hence, forecast of various financial parameters have been made on the basis of assumptions detailed in the ARR Petition. PSPCL has, therefore, requested the Commission to consider its Petition as a Provisional ARR Petition, subject to finalisation of the Transfer Scheme by GoP.

The Commission in its previous Tariff Order had observed that the Provisional Balance Sheets, of the two successor entities, ending March 31, 2009, as appended to the above mentioned Transfer Scheme showed significant variations when compared to the audited balance sheet of the integrated utility. Therefore, the Commission deemed it proper to rely on the information filed by the erstwhile Board in its ARR petition for FY 2010-11 and not on the Provisional Balance Sheet for the purpose of tariff determination for FY 2010-11. On the same lines, for FY 2011-12 also, the Commission has determined ARR and tariff based on the submissions of PSPCL in its ARR Petition for FY 2011-12. During True Up and Review of the ARR, the Commission has adhered to existing norms and principles.

In the ARR Petition for FY 2011-12, PSPCL has worked out a cumulative revenue gap of Rs. 9656.53 crore for FY 2011-12 including carried over gaps of FY 2009-10 and FY 2010-11. As the Petition filed by PSPCL did not contain any proposal to cover this gap, a letter dated 03.12.2010 was issued to PSPCL asking it to submit a tariff or any other proposal to cover this gap. PSPCL in its response on 09.12.2010 replied that the Commission may determine gap and fix tariff accordingly based on the details furnished by it in its ARR. The Commission took the ARR on record on 16.12.2010. On scrutiny it was noticed that the ARR was deficient in some respects and in its communication of 31.12.2010, the Commission sought further information which was furnished by PSPCL in its letters dated 02.02.2011 and 10.03.2011.

The Annual Revenue Requirement determined by the Commission in this Tariff Order is based on the Petition filed by PSPCL, operating as an integrated Utility performing functions of Generation, Distribution and Trading of electricity. The tariff determination by the Commission is based on the audited accounts of FY 2009-10 of the erstwhile Board, revised estimates of FY 2010-11 and projections of FY 2011-12 as submitted by PSPCL.

1.3 Invitation of Objections and Public Hearings

A public notice was published by the PSPCL in The Tribune, The Hindustan Times, Dainik Bhaskar and Daily Ajit on December 25/27, 2010 inviting objections from the general public on the ARR filed by the PSPCL. Copies of the ARR were made available on the website of the PSPCL and in the offices of the Chief Engineer/ARR and TR, PSPCL, Patiala, Liaison Officer, PSPCL Guest House, near Yadvindra Public School, Phase-8, Mohali and also in the offices of all the Chief Engineers (Operation) and all the Superintending Engineers-in-charge of Operation Circles of the PSPCL. In the public notice, objectors were advised to file their objections with the Secretary of the Commission upto January 27, 2011, with an advance copy to the PSPCL. The public notice also indicated that after perusing the objections received, the Commission will conduct public hearings on the dates which would be subsequently notified.

The Commission received nine written objections by 27.01.2011 and twenty one additional written objections thereafter. 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
1.	Chambers of Commerce	2
2.	Industrial Associations	6
3	Industry	5
4	Railways	1
5	PSEB Engineers/Employees Association	2
6	Individuals	11
7	Govt. of Punjab (GoP)	1
8	Forums	2
	Total	30

The list of objectors is given in **Annexure-I** to this Tariff Order. The PSPCL submitted its comments on most of the objections which were made available to the respective objectors.

The Commission decided to hold public hearings at Ludhiana, Chandigarh, Jalandhar and Bathinda. A public notice to this effect was published on 29-31.1.2011 in The Tribune, Indian Express, Times of India, Punjabi Tribune and Dainik Bhaskar informing the objectors, consumers and the general public in this respect as per details hereunder :

Venue	Date & time of public hearing	Category of consumers to be heard
LUDHIANA Circuit House, Ferozepur Road, Ludhiana.	Feb. 10, 2011 11.00 AM to 1.30 PM. (To be continued in the afternoon, if necessary).	All consumers/organizations of the area.
CHANDIGARH Commission office i.e. SCO 220-221, Sector 34- A, Chandigarh.	Feb. 11, 2011 10.30 AM to 1.30 PM	Industry
	3.00 P.M. onwards	Agricultural consumers and their unions.

Venue	Date & time of public hearing	Category of consumers to be heard
<u>CHANDIGARH</u> Commission office i.e. SCO 220-221, Sector 34-A, Chandigarh.	<u>Feb. 14, 2011</u> 10.30 AM to 1.30 PM	All consumers except Industry, Agricultural consumers and staff unions of the PSPCL and PSTCL.
	3.00 P.M. onwards	Staff unions of the PSPCL and PSTCL and other Organizations.
<u>JALANDHAR</u> Circuit House, Skylark Chowk, Opp. Skylark Hotel, Jalandhar	<u>Feb. 22, 2011</u> 11.00 AM to 1.30 PM (To be continued in the afternoon, if necessary).	All consumers/organizations of the area.
<u>BATHINDA</u> Circuit House, Civil Lines, Near D.C. residence, Bathinda.	<u>Feb. 25, 2011</u> 11.30 AM to 2.00 PM (To be continued in the afternoon, if necessary).	All consumers/organizations of the area.

Through public notices published in different newspapers, it was intimated that the Commission will conduct a public hearing at Chandigarh on March 11, 2011 in which the PSPCL will reply to written objections of the public and other issues raised during public hearings in addition to presenting its own case.

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

1.4 The Government was approached by the Commission through letter dated 30.12.2010 seeking its views on the ARR to which the Government responded on 19.04.2011. The same has been considered by the Commission.

1.5 State Advisory Committee

The State Advisory Committee set up under Section 87 of the Act, discussed the ARR of PSPCL in a meeting convened for the purpose on 8.03.2011. The minutes of the meeting of the State Advisory Committee are enclosed as **Annexure-III** to this Order.

The Commission has, thus, taken the necessary steps to ensure that the 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 the Board/PSPCL in the public interest. A summary of directives issued along with the comments of the Commission is given in **Annexure-IV** of this Tariff Order.

Chapter 2

True-up for FY 2009-10

2.1 Background

The Commission approved the ARR and Tariff for FY 2009-10 in its Tariff Order dated September 08, 2009, which was based on the costs and revenues estimated by the erstwhile Punjab State Electricity Board (the Board). The Board had furnished revised estimates for FY 2009-10 during the determination of ARR and Tariff for FY 2010-11 in which there were major differences in certain items of costs as well as projected revenues between the revised estimates furnished by the Board and the approvals granted by the Commission. The Commission, in its Tariff Order for FY 2010-11, reviewed its earlier approvals and re-determined the same based on the revised estimates made available by the Board. Now, the Punjab State Power Corporation Limited (PSPCL), one of the successor companies of the Board, and entrusted with the business of generation, trading and distribution of electricity in the State of Punjab, has furnished the Audited Annual Statement of Accounts (audited accounts) for FY 2009-10 for the composite Board, which again vary in parts with the figures taken into account in the Review for FY 2009-10 by the Commission. This Chapter contains a final true-up of FY 2009-10, based on the audited accounts for FY 2009-10 but without altering the principles and the norms approved earlier.

2.2 Energy Demand (Sales)

2.2.1 The sales projected by the Board during the determination of ARR for FY 2009-10, sales approved by the Commission in the Tariff Order for FY 2009-10, revised estimates furnished during determination of ARR for FY 2010-11, sales approved by the Commission in review, and actual sales figures now given in the audited accounts and ARR Petition of the PSPCL are summarized in Table 2-1:

Table 2-1: Energy Sales – FY 2009-10

(MU)

Sr. No	Category	Projected by PSEB during determination of ARR FY 2009-10	Approved by the Commission in T.O. FY 2009-10	Revised Estimates of PSEB during determination of ARR of FY 2010-11	Approved by the Commission in Review	Actual as in ARR of FY 2011-12	Now Approved by the Commission
1	2	3	4	5	6	7	8
1	Domestic	7240	6960	7336	7300	7310	7310
2	Non-Residential	2320	2145	2135	2178	2147	2147
3	Small Power	741	722	768	742	775	775
4	Medium Supply	1590	1522	1607	1509	1619	1619
5	Large Supply	9812	9278	8741	8619	8795	8795
6	Public Lighting	158	148	148	128	137	137
7	Bulk Supply	531	500	495	484	499	499
8	Railway Traction	118	123	149	132	148	148
9	Total Metered sales (within State)	22510	21398	21379	21092	21430*	21430
10	Agriculture pump sets	11699	9814	10363	9814	10505	9678
11	Total sales within the State	34209	31212	31742	30906	31935*	31108
12	Common pool	302	303	302	302	303	303
13	Outside State sales	1307	1307	297	1383	461**	14
14	Total (11+12+13)	35818	32822	32341	32591	32699*	31425

*Against 21,429, 31,934 and 32,698 mentioned in the ARR.

**Includes 347 MU of transactions due to Open Access.

PSPCL has furnished the actual total sales at 32,698 MU for FY 2009-10 as per audited accounts of the Board including theft of energy of 365.23 MU. This theft of energy has not been apportioned to different consumer categories in the audited accounts, but PSPCL in its ARR petition (Vol. 1) for FY 2011-12 has submitted category-wise sales for FY 2009-10 by apportioning such energy to each category of consumers (metered) on pro-rata basis, which is as per column 7 of Table 2-1.

2.2.2 Metered Sales: In metered sales, the Board has included 365.23 MU of energy on account of theft. The revenue on this account has been shown as Rs. 115.12 crore in the audited accounts. In the Tariff Order for FY 2010-11,

the Commission had directed the erstwhile Board to correctly account for the amount assessed on account of theft. PSPCL, in its Petition, has again submitted that in the books of accounts of the Board of FY 2009-10, the theft of energy is still not segregated consumer category-wise and for the purpose of this ARR filing, PSPCL has apportioned such energy to each category on a pro-rata basis as was being done in the past. The Commission has considered metered sales for FY 2009-10 on the basis of actuals given in the audited accounts for FY 2009-10, after adjusting theft of energy to the extent of 365.23 MU to different metered consumer categories on a pro-rata basis. The Commission, thus, approves metered sales within the State at 21,430 MU.

Further, PSPCL has submitted that 461 MU of energy recorded in audited accounts under the head "Outside State Sales" consists of 347 MU of transactions under open access and 114 MU of actual sales outside the State and that the transaction of 347 MU under open access should not be recorded as Outside State sale. The Commission is inclined to agree to the submission and excludes 347 MU from Outside State sales as also 47 MU as free share in RSD for Himachal Pradesh and 53 MU as royalty in Shanan from the balance of 114 MU of Outside State sales. Therefore, the Commission considers the Outside State sale of 14 MU (114 - 47 - 53) only and common pool sale of 303 MU on the basis of actuals as given in the audited accounts for FY 2009-10.

The Commission also notes that PSPCL has not considered the sale under banking as Outside State sale due to change in the accounting procedure. While reviewing FY 2009-10 in the TO 2010-11, the Commission had decided that this change in accounting procedure would be considered from FY 2010-11 onwards. In ARR for FY 2011-12, PSPCL has not considered the sale and purchase of power under banking as per its previous practice. The Commission further notes that the modified practice does not involve any financial implication, therefore, the Commission accepts the submissions of PSPCL for sale and purchase of power under banking.

Metered sales now approved by the Commission are as shown in column 8 of Table 2-1.

2.2.3 **AP Consumption:** The Board in the ARR Petition for FY 2009-10 had projected AP consumption at 11,699 MU by applying normative growth rate of 8% twice over the consumption recorded in FY 2007-08. The Commission, in its Tariff Order for FY 2009-10, approved AP consumption of 9,814 MU after allowing a normative growth of 5% twice over the consumption worked out by the Commission for FY 2007-08. In the ARR Petition for FY 2010-11, the Board submitted the revised estimates for AP consumption at 10,363 MU, however, the Commission retained the approved AP consumption figure of 9,814 MU. In the ARR Petition for FY 2011-12, PSPCL has submitted that as per audited accounts of the Board, the actual AP Consumption for FY 2009-10 is 10,505 MU.

The Commission has over the last several years been attempting to fine-tune the methodology of computing agricultural consumption with a view to ensuring that estimates are as accurate as possible. In that context, the Commission had in the Tariff Order for FY 2009-10 directed the Board to take some specific measures, and reiterated the same in the Tariff Order for FY 2010-11. The status of compliance of each directive of the Commission by PSPCL is as under:

- a. Monthly division-wise consumption recorded by sample meters is being submitted every month from 1.3.2010 onwards.
- b. Monthly division-wise data is being submitted regarding:
 - (i) Details of the load on each sample AP meter, initial and final meter readings, total connected load of these sample meters and total consumption recorded by sample meters.
 - (ii) Details of increase/decrease in loads of sample meter along with total connected load of each division.
 - (iii) Information regarding actual supply hours to Agricultural pumpsets.
- c. Division-wise details of meters where readings are in excess of what can possibly be consumed during the given supply hours and connected load are being furnished every month and these sample meter readings are not being taken into account for evaluation of AP factor.
- d. Efforts are being made to ensure that the percentage of faulty/non-functional meters is brought within 10% of total number of sample meters installed in a division during any month of the year.

e. Efforts are being made to achieve 10% sample size and the number of sample meters has increased from 83,603 numbers ending April 2010 to 98,531 numbers ending September 2010 against the total number of AP connections of 11,19,627.

2.2.4 The Commission observes that in the Tariff Order for FY 2009-10 which was issued in September, 2009, the AP consumption reported by the Board for FY 2008-09 was reduced by 10.20% based on the study got conducted by the Commission and approved the AP consumption of 8,395 MU against 9,349 MU as claimed by the Board. As the TO for FY 2009-10 was issued in September, 2009, the Commission can reasonably presume that any steps taken to rectify the defects/deficiencies for computing the AP consumption would have commenced only after the issue of TO in September, 2009. Hence, the Commission decides to reduce the AP consumption by 10.20% for the first half of FY 2009-10 i.e. till September, 2009.

2.2.5 Even after the issue of the Tariff Order for FY 2009-10, the Board could not completely rectify the various discrepancies listed out by the agency engaged for this purpose, as is evident from the analysis of excess consumption submitted by PSPCL for first half of FY 2010-11, where reporting of excess consumption to the extent of 4.03% on the same methodology has been observed. The Commission can therefore reasonably presume that excess consumption to this extent was being reported by PSPCL during the second half of FY 2009-10 as well. The Commission, therefore, after considering the steps taken by PSPCL decides to reduce the AP consumption reported for second half of FY 2009-10 by 4.03%. The total AP consumption for FY 2009-10 is thus worked out in Table 2-2.

Table 2-2: AP Consumption – FY 2009-10
(MU)

Particulars	AP Consumption reported by PSPCL	AP Consumption accepted by the Commission
First half of FY 2009-10	6548	5880
Second half of FY 2009-10	3957	3798
Total	10505	9678

The Commission thus approves the AP consumption of 9,678 MU for FY 2009-10.

2.3 Transmission and Distribution Losses (T&D Losses)

The Commission, in its Tariff Order of FY 2009-10, fixed the target of T&D losses at 22%. During the determination of ARR of FY 2010-11, the Board stated that T&D losses in FY 2009-10 would be 19.50%. This revised loss level proposed by the Board did not take into account the revision of AP consumption as considered by the Commission in the Tariff order for FY 2009-10. Therefore, the Commission retained T&D losses at 22% in the Review. PSPCL has now intimated that the T&D losses as per the audited accounts of the Board for FY 2009-10 are 20.12%. However, the audited accounts include an additional purchase of 502 MUs and sale of 347 MUs on account of open access, and thus the actual T&D losses after adjusting the additional purchase and sale is determined at 19.81%.

The Commission, however, decides to retain the T&D losses at 22% as approved in the Tariff Order for FY 2009-10.

2.4 PSEB's Own Generation

2.4.1 Thermal Generation: The station-wise generation projected by the Board during the determination of ARR for FY 2009-10, generation approved by the Commission in its Tariff Order, revised estimates furnished by the Board during determination of ARR for FY 2010-11, generation approved by the Commission in the Review, actuals now submitted by PSPCL and those approved by the Commission is given in Table 2-3.

Table 2-3: Thermal Generation – FY 2009-10

(MU)

Sr. No.	Station	Projected by PSEB during determination of ARR FY 2009-10		Approved by the Commission T.O. FY 2009-10		Revised Estimates by PSEB in ARR FY 2010-11		Approved by the Commission T.O. FY 2010-11		Actuals by PSPCL submitted in ARR for FY 2011-12		Now approved by the Commission	
		Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1A	GNDTP Unit I&II			1580	1419			1546	1376	1575	1396	1575	1402
1B	GNDTP Unit III&IV	2330	2062	1221	1087	2702	2388	1251	1113	1148	1018	1148	1022
2	GGSSTP	9200	8409	9966	9119	9564	8765	10086	9229	10056	9238	10056	9201
3A	GHTP Stage-1	3220	2930	6948	6323	7317	6700	7428	6760	6042	5545	6042	5498
3B*	GHTP Stage-2	3504	3189							1473	1378	1473	1378
4	Total	18254	16590	19715	17948	19583	17853	20311	18478	20294	18575	20294	18501

* Figures in columns 11 to 14 for Sr.No.3B GHTP Stage-2 are only till COD of GHTP Unit IV. Post COD figures of generation by GHTP Stage-2 units are included against Sr.No.3A GHTP Stage-1.

Plant-wise generation is not available in the audited accounts and as such the data supplied along with the Petition of FY 2011-12 and the generation figures validated by the Commission have been taken into account.

Accordingly, the Commission approves gross thermal generation for FY 2009-10 at 20,294 MU.

Auxiliary Consumption

The auxiliary consumption projected by the Board during determination of ARR by the Commission for FY 2009-10, auxiliary consumption approved by the Commission in the Tariff Order, revised estimates furnished during determination of ARR for FY 2010-11, auxiliary consumption approved by the Commission in the review, actuals now submitted by PSPCL with the Petition for FY 2011-12, and auxiliary consumption approved by the Commission is given in Table 2-4.

Table 2-4: Auxiliary Consumption – FY 2009-10

Sr. No.	Station	Projected by PSEB in ARR FY 2009-10	Approved by the Commission in T.O. FY 2009-10	Revised Estimates by PSEB in ARR FY 2010-11	Approved by the Commission T.O. FY 2010-11	PSPCL Submission in ARR for FY 2011-12	Now approved by the Commission
1	2	3	4	5	6	7	8
1 (a)	GNDTP Unit I & II	11.50%	10.22%	11.64%	11.00%	11.36%	11.00%
1 (b)	GNDTP Unit III & IV		11.00%				
2	GGSSSTP	8.60%	8.50%	8.36%	8.50%	8.14%	8.50%
3 (a)	GHTP	9.00%	9.00%	8.42%	9.00%	8.23%	9.00%
3 (b)	GHTP-IV (Prior COD) to					6.44%	6.44%

It is observed that as compared to the approved level, actual auxiliary consumption now reported by PSPCL is marginally higher for GNDTP and lower for GGSSTP and GHTP. The Commission observes that the auxiliary consumption of GGSSTP and GHTP has been approved on normative basis, whereas for GNDTP, the Commission had approved the same at 11.00% while reviewing the costs for FY 2009-10 in para 3.5.1 of the Tariff Order for FY 2010-11.

PSPCL, in its additional information has reported that Unit IV of GHTP was put into commercial operation on January 25, 2010. The Commission is of the view that auxiliary consumption should be considered at actual level for the energy generated till commercial operation of Unit IV. Accordingly, the Commission approves the auxiliary consumption of 6.44% as per actuals.

In view of the above, the Commission approves the auxiliary consumption of 11.00%, 8.50% and 9.00% for GNDTP, GGSSTP and GHTP respectively and 6.44% for GHTP Unit IV till its commercial operation.

The thermal generation on this basis of normative auxiliary consumption works out to 18,501 MU (net) as shown under column 14 of Table 2-3.

The Commission further observes that PSPCL has over achieved the target for net energy generation by 553 MU as shown in Table 2-3. The Commission

has considered the additional net generation and consequential less power purchase requirement to that extent. This is discussed further in para 2.10.

2.4.2 **Hydel Generation:** The station-wise generation submitted by the Board to the Commission during determination of ARR for FY 2009-10, generation approved by the Commission in its Tariff Order, revised estimates furnished by the Board during determination of ARR for FY 2010-11, generation approved by the Commission in review, actuals now furnished by PSPCL and those accepted by the Commission are given in Table 2-5:

Table 2-5: Hydel Generation – FY 2009-10

							(MU)
Sr. No.	Hydel Station	Projected by PSEB during determination of ARR for FY 2009-10	Approved by Commission in TO FY 2009-10	Revised Estimates by PSEB in ARR FY 2010-11	Approved by Commission in TO FY 2010-11	Actual by PSPCL submitted in ARR for FY 2011-12	Now Approved by the Commission
1	2	3	4	5	6	7	8
1	Shanan	515	515	496	496	511	511
2	UBDC	448	448	381	381	337	337
3	RSD	1744	1743	1200	1200	1069	1069
4	MHP	1257	1257	793	793	886	886
5	ASHP	695	695	603	603	574	574
6	Micro Hydel	7	7	9	9	13	13
7	Total own hydel						
(a)	Gross	4665	4665	3482	3482	3390*	3390
(b)	Auxiliary consumption & Transformation losses Plus Share of HP in RSD & Royalty to HP in Shanan)	61	171	46	136	40	127¹
(c)	Net Own Hydel	4604	4494	3436	3346	3350	3263
8	PSEB Share from BBMB						
(a)	Net Share	4152	4152	3689	3689	3674	3674
(b)	Add Common pool share	302	303	302	302	303	303
(c)	Net Share from BBMB	4454	4455	3991	3991	3977	3977
9	Total Net Hydel (Own + BBMB)	9058	8949	7427	7337	7327	7240

1. Transformation losses @ 0.5% (17 MU), auxiliary consumption @ 0.5% for RSD generation of 1,069 MU and UBDC Stage-1 generation of 142 MU (having static exciters) and @ 0.2% for others (10 MU), HP share in RSD (47 MU and Royalty to HP in Shanan (53 MU).

* As against 3,389 MU shown in the ARR.

The actual gross hydel generation from the Board's own hydel stations for FY 2009-10 is 3,390 MU, and the Commission approves the same. In line with the principle adopted by the Commission in previous Tariff Orders for free HP share in RSD and royalty in Shanan, the Commission works out the net hydel generation by deducting auxiliary consumption, transformation losses, HP royalty in Shanan and free share of HP in RSD. Thus, net hydel generation for FY 2009-10 is calculated to be 3,263 MU. The actual net availability from BBMB is 3,977 MU, including common pool share, which the Commission accepts.

The Commission, therefore, approves net hydel generation for FY 2009-10 at 3,263 MU from the Board's own hydel generating stations and 3,977 MU as net share from BBMB, as shown in Table 2-5 above.

2.5 Power Purchase

The Commission, in its Tariff Order for FY 2009-10, approved net power purchase of 14,728 MU. During determination of ARR of 2010-11, the Board furnished revised estimates of net power purchase at 15,836 MU, and revised it to 14,750 MU later on 11.02.2010. The Commission approved the net power purchase of 15,493 MU. PSPCL, now in its Petition has submitted net power purchase during FY 2009-10 as 14,336 MU. The matter is further discussed in para 2.8.

2.6 Energy Balance

2.6.1 The details of energy requirement and availability for FY 2009-10, approved by the Commission in review in the Tariff Order of FY 2010-11 and the actuals now furnished by PSPCL are given in Table 2-6. The energy balance, including T&D losses along with sales and availability now approved by the Commission is depicted in column 6 of Table 2-6.

Table 2-6: Energy Balance –FY 2009-10

(MU)

Sr. No.	Particulars	Approved by the Commission in T.O. for FY 2010-11	PSPCL Submission in ARR for FY 2011-12	Now Approved by the Commission	Sales and actual T&D losses as per approved energy available
1	2	3	4	5	6
A) Energy Requirement					
1	Metered Sales	21092	21429	21430	21430
2	Sales to AP consumers	9814	10505	9678	9678
3	Total Sales within the State	30906	31934	31108	31108
4	T & D loss percentage	22.00%	19.80%	22.00%	21.76%
5	T&D losses	8717	7888	8774	8652
6	Sales to Common pool consumers	302	303	303	303
7	Outside State Sales	1383	114	14	14
8	Total requirement	41308	40238	40199	40077
B) Energy Available					
9	Own generation (Ex-bus)				
10	Thermal	18478	18576	18501	18501
11	Hydro				
12	Share from BBMB (incl. share of common pool consumers)	7337	7326	7240	7240
13	Purchase (net)	15493	14336	14336	14336
14	Total Available	41308	40238	40077	40077

2.6.2 The total energy available with the Board works out to 40,077 MU (net), considering all purchases and own generation (net). With this energy available, the Commission works out the T&D losses as 21.76%. Achievement of T&D losses lower than that approved by the Commission, has resulted in savings in net power purchase to the extent of 122 (8,774 - 8,652) MU. The matter is further discussed in para 2.9.

The Commission approves the total energy requirement for FY 2009-10 at 40,077 MU (net).

2.7 Fuel Cost

2.7.1 In its Tariff Order for FY 2009-10, the Commission approved the fuel cost as Rs. 3,195.93 crore for a gross thermal generation of 19,715 MU. In review, this cost was revised to Rs. 3,414.58 crore for the then approved gross generation of 20,311 MU. Details of approved fuel cost in the Tariff Order for FY 2009-10 and review are given in Table 2-7.

Table 2-7: Fuel Cost – FY 2009-10

Sr. No.	Station	As per T.O. for FY 2009-10		As per Review in T.O. for FY 2010-11	
		Gross Generation (MU)	Fuel Cost (Rs. crore)	Gross Generation (MU)	Fuel Cost (Rs. crore)
1	2	3	4	5	6
1A	GNDTP Unit I&II	1580	262.05	1546	267.71
1B	GNDTP Unit III&IV	1221	221.81	1251	235.69
2	GGSSTP	9966	1613.82	10086	1704.53
3	GHTP	6948	1098.25	7428	1206.65
4	Total	19715	3195.93	20311	3414.58

2.7.2 PSPCL, in its ARR Petition for FY 2011-12, has indicated actual fuel cost for FY 2009-10 as Rs. 3,621.85 crore (including fuel cost of Rs. 235.85 crore for infirm power from Unit IV of GHTP during its trial run prior to COD) for a gross generation of 20,294 MU whereas in the audited accounts of FY 2009-10, the total generation expenses are Rs. 3,642.79 crore. These comprise of Rs. 3,536.23 crore for coal and oil consumption, Rs. 48.26 crore for other fuel related costs including octroi, contract handling charges, siding charges, etc., Rs. 37.36 crore for fuel related losses including transit losses, and Rs. 20.94 crore for other operating expenses such as cost of water, lubricants, consumable stores and station supplies. Out of these, Rs. 20.94 crore booked towards other operating expenses do not form part of the fuel cost and are being considered under repair and maintenance expenses in para 2.12.2. Thus, the net fuel cost as per audited accounts is taken as Rs. 3,621.85 (3,642.79 – 20.94) crore.

PSPCL has submitted the calorific value of the coal and oil, price of coal and oil and the transit loss of coal to determine the fuel expenses for FY 2009-10, as summarised in Table 2-7A:

Table 2-7A: Calorific Value and Price of Coal and Oil and Transit Loss of Coal as submitted by the PSPCL - FY 2009-10

Sr. No.	Station	As submitted by PSPCL				
		Calorific value of coal (kcal/kg)	Calorific Value of Oil (kcal/ltr)	Price of Oil (Rs./kL)	Price of coal excluding transit loss (Rs./MT)	Transit loss (%)
1	2	3	4	5	6	7
1	GNDTP	4073	9400	26009	2592	0.66%
2	GGSSSTP	3968	10000	24382	2764	1.14%
3	GHTP	4022	9500	28533	2652	1.16%

2.7.3 Fuel cost being a major item of expense, the Commission thought it prudent to get the same validated. The finally accepted values are indicated in Table - 2-7B.

Table 2-7B: Calorific Value and Price of Coal and Oil and Transit Loss of Coal as approved by the Commission - FY 2009-10

Sr. No.	Station	Approved by the Commission after validation				
		Gross Calorific value of coal (kCal/Kg)	Calorific Value of Oil (kCal/Ltr)	Price of Oil (Rs./KL)	Price of coal excluding transit loss (Rs./MT)	Transit loss (%)
1	2	3	4	5	6	7
1	GNDTP	4073	9400	26009	2588	0.66%
2	GGSSSTP	3968	10000	24381	2762	1.14%
3	GHTP	4022	9500	28536	2646	1.16%

The Commission observes that PSPCL has reported the calorific value of 4,022 kcal/kg for GHTP for FY 2009-10 which in audited accounts depicts the calorific value as 3,783 kcal/kg. During the validation from the plant, the Commission found Gross Calorific Value of coal for GHTP as 4,022 kcal/kg whereas the audited accounts depicts Net Calorific Value. As per the past accepted principle, the Commission approves the Gross Calorific Value of coal for GHTP at 4,022 kcal/kg.

2.7.4 As regards Station Heat Rate (SHR) of GGSSSTP, PSPCL has submitted that the average de-rating age for the turbines of 6 Units as on 30.9.2009 was 14.89% and under these circumstances, the efficiencies of the boiler and

other plant assemblies are bound to decline from their designed values. Accordingly, PSPCL has proposed that SHR of 2,700 kcal/kwh would be a more realistic assessment. PSPCL has submitted that SHR of Units of GNDTP where Renovation & Modernisation has been carried out has improved. Unit 3 and Unit 4 are scheduled for Renovation & Modernisation works and overall performance of these Units will improve in the subsequent years, accordingly the proposed 6% escalation in SHR would be more realistic. The Commission notes that similar submissions regarding the performance parameters of PSPCL's Thermal Plants were made at the time of ARR for FY 2009-10. The Commission is of the view that the principles and norms on which these matters were decided in the original Tariff Order cannot be revisited during true-up for FY 2009-10 and accordingly, performance parameters as fixed in the Tariff Order of the relevant year are retained.

- 2.7.5 In the ARR Petition for FY 2011-12, PSPCL has not reported any consumption of imported coal for FY 2009-10. This was also verified at the power stations at the time of validation, when it was noted that a substantial quantity of coal from the Board's captive coal mine (PANAM) was used during FY 2009-10 which is priced F.O.R. destination. The price of coal and corresponding calorific values given by the PSPCL in the ARR Petition (Table 2-7A) and those validated by the Commission (Table 2-7B) are weighted average values of coal, including PANAM coal.
- 2.7.6 The Commission has now approved gross thermal generation of 20,294 MU (1,575 MU for GNDTP Units-I&II, 1,148 MU for GNDTP Units-III&IV, 10,056 MU for GGSSTP and 7,515 MU for GHTP) as discussed in para 2.4.1. The fuel cost for different thermal stations corresponding to generation now approved has been worked out, on the basis of parameters adopted by the Commission in its Tariff Order for FY 2009-10. For GHTP-IV, the fuel cost for the 1,473 MU of energy generated before its Commercial Operation, is approved at actuals as claimed by PSPCL. Price and calorific value of coal and oil has been adopted as validated and accepted by the Commission.
- 2.7.7 No transit loss has been allowed for PANAM coal while arriving at fuel cost as prices according to the contract, are on F.O.R. destination basis. In case of

coal other than PANAM coal, transit loss of 2% has been allowed by the Commission.

2.7.8 On the above basis, fuel cost for FY 2009-10 for different thermal stations corresponding to actual generation is given in Table 2-8.

Table 2-8: Approved Fuel Cost - FY 2009-10

Sr. No.	Item	Derivation	Unit	Now approved by the Commission					
				GNDTP Unit I&II	GNDTP Unit III&IV	GGSSSTP	GHTP	GHTP Unit IV (prior to COD)	Total
1	2	3	4	5	6	7	8	9	10
1	Generation	A	MU	1575	1148	10056	6042	1473	20294
2	Heat Rate	B	kcal/kWh Generated	2825	3000	2500	2500		
3	Specific oil consumption	C	ml/kWh	1.00	3.50	1.00	1.00		
4	Calorific value of oil	D	kcal/litre	9400	9400	10000	9500		
5	Calorific value of coal	E	kcal/kg	4073	4073	3968	4022		
6	Overall heat	$F = (A \times B)$	Gcal	4449375	3444000	25140000	15105000		
7	Heat from oil	$G = (A \times C \times D) / 1000$	Gcal	14805	37769	100560	57399		
8	Heat from coal	$H = (F - G)$	Gcal	4434570	3406231	25039440	15047601		
9	Oil consumption	$I = (G \times 1000) / D$	Kl	1575	4018	10056	6042		
10	Transit loss of coal	J	%	2.00	2.00	2.00	2.00		
11	Total coal consumption excluding transit loss	$K = (H \times 1000) / E$	MT	1088853	836357	6310367	3741295		
12	Quantity of PANAM coal*	L	MT	697221	508197	3376848	3278969		
13	Quantity of coal other than PANAM coal excluding transit loss	$M = K - L$	MT	391631	328160	2933519	462326		

Sr. No.	Item	Derivation	Unit	Now approved by the Commission					
				GNDTP Unit I&II	GNDTP Unit III&IV	GGSSSTP	GHTP	GHTP Unit IV (prior to COD)	Total
1	2	3	4	5	6	7	8	9	10
14	Quantity of coal other than PANAM coal including transit loss	$N=M/(1-J)$	MT	399624	334857	2993386	471761		
15	Total quantity of coal required	$O=L+N$	MT	1096845	843054	6370234	3750730		
16	Price of coal without transit loss	P	Rs. /MT	2588	2588	2762	2646		
17	Price of oil	Q	Rs./KI	26009	26009	24381	28536		
20	Total cost of oil	$R=Q \times I / 10^7$	Rs. crore	4.10	10.45	24.52	17.24	11.53	67.84
21	Cost of coal	$S=O \times P / 10^7$	Rs. crore	283.86	218.18	1,759.73	992.59	224.32	3478.68
22	Total Fuel Cost	T= R+S	Rs. crore	287.96	228.63	1784.25	1009.83	235.85	3546.52

* Quantity of PANAM coal where not given for different Units of a plant has been considered on pro-rata basis of generation.

The Commission, thus, approves the fuel cost at Rs. 3,546.52 crore for gross generation of 20,294 MU for FY 2009-10.

2.8 Power Purchase Cost

2.8.1 The Commission, in its Tariff Order for FY 2009-10, approved a cost of Rs. 4,746.59 crore for purchase of 15,456 MU (gross). In review, the Commission revised it to Rs. 4,969.65 crore for the purchase of 16,262 MU (gross).

2.8.2 The gross power purchase for FY 2009-10 now reported by PSPCL is 15,064 MU and the net power purchase is 14,336 MUs after accounting for external losses of 4.83%. The audited accounts for FY 2009-10 depict the net power purchase as 14,839 MUs after accounting for external losses of 4.68% (728 MU). The difference is on account of treatment of power purchase for open

access transactions. The total power purchase cost reported by PSPCL and accounted for in the audited accounts for FY 2009-10 is Rs. 4,653.19 crore.

The Commission observes that as per previous practice, requirement of power purchase at the time of review is based only on the energy balance as determined in the Tariff Order for the relevant year and approved accordingly. However, at the time of true up, the actual quantum of power purchase is allowed since it has been purchased by PSPCL and supplied to the consumers of different categories.

The Commission in Tariff Order for FY 2009-10 had limited the cost of power purchase from the traders at an average rate of 621.24 paise per unit. It had also been decided that the cost of power purchased from traders in excess of the approved quantum of 1,073 MU will be admissible only at an average rate of realisation of 402.46 paise per unit. PSPCL in its ARR Petition for FY 2011-12 has shown power purchase of 1,833 MU during FY 2009-10 at an average rate of 612.92 paise per unit. Since the Tariff Order for FY 2009-10 was issued in the month of September 2009, the Commission does not consider it fair to penalize the Board/PSPCL for the purchase of additional power from traders during first six months of FY 2009-10. However, the Commission takes note of the purchase of additional quantum of 102.09 MU from the traders during October 2009 to March 2010 at an average rate of 673.43 paise per unit. The additional cost of Rs. 27.66 crore incurred by the Board/PSPCL for purchase of 102.09 MU at the excessive rate of 270.97 paise per unit (673.43-402.46) is disallowed.

The Commission had also decided not to allow additional UI surcharge leviable under CERC's UI Regulations for over-drawal of power when frequency is below 49.2 Hz. PSPCL in its letter dated 03.03.2011 has intimated that the additional amount payable for UI drawal below frequency of 49.2 Hz for FY 2009-10 as Rs. 21.79 crore. Since the Tariff Order for FY 2009-10 was issued in the month of September 2009, therefore, the Commission decides not to penalise the PSPCL for the UI drawal below frequency of 49.2 Hz during first six months of FY 2009-10. The Commission notes that the additional UI surcharge paid by the Board during the period of

Oct'2009 to March'2010 is Rs. 8.53 crore. The Commission disallows the same.

Accordingly, the Commission approves a cost of Rs. 4,617 (4,653.19 - 27.66 - 8.53) crore for purchase of 14,336 MU (net).

2.8.3 The Commission had in its Tariff Order of FY 2009-10 mentioned that any change in fuel cost from the level approved by the Commission would be passed on to the consumers as Fuel Cost Adjustment (FCA). The Board filed Petitions (7 of 2010 and 20 of 2010) for approval of FCA for the 3rd and 4th quarters of 2009-10. The Commission observes since the variable cost of fuel has been validated for FY 2009-10 and the power purchase cost has been allowed on the basis of actual power purchase cost for FY 2009-10, the FCA Petitions may be deemed to be disposed of accordingly.

2.9 Incentive approved on account of lower T&D losses

As discussed in para 2.6.2, the Board has over-achieved the T&D loss level vis-a-vis the target approved by the Commission. As per the PSERC Tariff Regulations, the entire gain on account of overachievement of T&D losses as compared to targets set by the Commission is to be retained by the licensee. As brought out in afore-mentioned para, T&D loss level lower than that approved by the Commission has resulted in decrease in power purchase to the extent of 122 MUs (net), the pro-rata cost of which based on power purchase cost approved in para 2.8.2, works out to Rs. 39.29 (4,617 x 122/ 14,336) crore.

The Commission, therefore, allows incentive to the extent of Rs. 39.29 crore on account of lower T&D losses.

2.10 Incentive for higher thermal generation

The Commission has noted that there is increase in thermal generation to the extent of 579 MU gross (553 MU net). The station-wise increase in gross generation compared to the generation approved in the Tariff Order for FY 2009-10 is 90 MU (10,056-9,966) for GGSSTP and 567 (7,515-6,948) MU for GHTP. For GNDTP, there is a decrease in generation of 78 (2,801-2,723)

MU. The increase in fuel cost for different stations corresponding to this variation in generation cost now approved, works out to Rs. 94.51 crore as given in Table 2-9 below:

Table 2-9: Generation Incentive - FY 2009-10

Sr. No.	Station	Now approved by the Commission		Increase/ Decrease in Fuel Cost due to more/less Generation	
		Generation (MU)	Fuel Cost (Rs. crore)	Increase/ Decrease in Generation (MU)	Increase/ Decrease in Fuel Cost (Rs. crore)
1	2	3	4	5	6
1	GNDTP Unit I & II	1575	287.96	(5)	(0.91)
2	GNDTP Unit III & IV	1148	228.63	(73)	(14.54)
3	GGSSTP	10056	1784.25	90	15.97
4	GHTP	7515	1245.68	567	93.99
5	Total	20294	3546.52	579	94.51

The decrease in power purchase cost on account of higher generation of 553 MU (net) based on power purchase cost approved in para 2.8, works out to Rs. 178.10 crore (553 /14,336 x 4,617). Accordingly, the net saving in power purchase cost is Rs. 83.59 (178.10 – 94.51) crore.

Therefore, the Commission approves the net incentive of Rs. 83.59 crore, on account of higher generation.

2.11 Employee Cost

2.11.1 The Commission, in its Tariff Order for FY 2009-10, approved employee cost of Rs.1,856.60 crore. In the review, in accordance with amended provisions of the PSERC Tariff Regulations, 2009, the Commission revised the employee cost to Rs. 2,354.48 crore. This included terminal benefits of Rs. 866.80 crore as submitted by the Board and approved by the Commission, other employee expenses of Rs. 1,375.93 crore computed by applying an increase of 5% to the approved other employee cost of Rs. 1,310.41 crore for FY 2008-09 and Rs. 111.75 crore on account of pay revision.

2.11.2 The employee cost, as per audited accounts of the Board for FY 2009-10, is Rs. 2,614.51 crore (gross). The net cost after reducing capitalization amount

of Rs. 117.80 crore is Rs. 2,496.71 crore. This includes terminal benefits (inclusive of BBMB share) of Rs. 763.87 crore and other employee cost of Rs. 1,732.84 crore. The Commission also observes that as per Audit Note annexed to Annual Accounts of FY 2009-10, employee cost has been understated by Rs. 6.58 crore. Thus, the total employee cost of the Board works out to Rs. 2,503.29 crore (net).

2.11.3 The provisions of the PSERC Tariff Regulations provide for determination of employee cost in two parts:

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

In the ARR Petition, PSPCL has claimed net employee cost of Rs. 2,496.71 crore for FY 2009-10 inclusive of terminal benefits and BBMB share of Rs. 763.87 crore. These terminal benefits include impact of pay revision and are allowable on actual basis.

2.11.4 As per amended Regulations, increase in other employee cost is to be limited to average Wholesale Price Index (WPI) increase. The average percentage increase in WPI for the year 2009-10 works out to 3.85%. The Commission recognising that this increase is reflective of a global recessionary trend, deems it prudent to retain an increase of 5%, similar to the approach adopted while reviewing the year 2009-10 in the Tariff Order for FY 2010-11. Applying this increase to the base figure of Rs. 1,310.41 crore, as determined for FY 2008-09, would result in an increase of other expenses to Rs. 1,375.93 crore. This amount would be allowable as other employee cost for FY 2009-10. Thus, allowable expenses on account of terminal benefits and other employee costs work out to Rs. 2,139.80 (763.87+1,375.93) crore.

2.11.5 Regulation 28(8)(b) of the amended Tariff Regulations provides for consideration of any exceptional increase such as pay revision. The Commission observes that PSPCL has not claimed any amount on account of Pay revision separately for FY 2009-10. However, since, the Board (consequent upon implementation of the Pay Commission Report) has paid

revised salary to its employees with effect from November 2009 onwards, the impact of the revised pay of Rs. 156.25 crore as determined in para 3.10.5 of Tariff Order of 2010-11 for the period from November 2009 to March 2010 is being relied upon. This does not include enhancement of terminal benefits as the same is allowed in full by the Commission in para 2.11.3 above as claimed by PSPCL in the ARR Petition. The Commission also observes that the additional amount of Rs. 156.25 crore is based on the total employee cost actually incurred by the Board. However, the Commission has been determining the employee expenses on a normative basis by taking into account the employee cost claimed by the Board for FY 2007-08, FY 2008-09 and FY 2009-10 (projections) and the cost allowed by the Commission in those years. It is noted that on an average, for all these years, the employee cost allowed by the Commission is 28.48% less than the amount actually claimed by the Board. The Commission is, therefore, of the view that the sum of Rs. 156.25 crore for pay revision during FY 2009-10 needs also to be reduced by 28.48%. A reduction on this account is of the order of Rs. 44.50 crore and the allowable cost on this account works out to Rs. 111.75 crore. Thus, the employee cost for FY 2009-10 works out to Rs. 2,251.55 (763.87+1,375.93+111.75) crore.

2.11.6 The Commission also takes note of the Board's continued failure to draw up a roadmap for rationalisation of its manpower. As in the past, the Commission retains its earlier decision to impose a deduction of Rs. 100 crore on account of PSPCL/PSTCL's (and the Board's) inability to decide upon this crucial issue. The impact of this deduction is reflected in para 3.10.5 of Chapter 3 of PSPCL and para 2.4.7 of Chapter 2 of PSTCL Tariff Orders.

The Commission, accordingly, approves employee cost of Rs. 2,251.55 (763.87+1,375.93+111.75) crore for FY 2009-10.

2.12 Repairs and Maintenance (R&M) Expenses

2.12.1 The Commission approved R&M expenses of Rs. 376.14 crore in its Tariff Order for FY 2009-10. In the review, the Commission approved R&M expenses of Rs. 385.93 crore as claimed by the Board.

2.12.2 In the ARR Petition for FY 2011-12, PSPCL has claimed R&M Expenses of Rs. 381.14 crore net of capitalisation of Rs. 2.03 crore. These expenses also include Rs. 20.94 crore on account of operating expenses at the generation stations. As per the Audit Note appended to Annual Statement of Accounts, R&M expenses have been overstated by Rs. 2.98 crore. Taking these into account, R&M expenses incurred by the Board amount to Rs. 378.16 (381.14-2.98) crore.

2.12.3 The PSERC Tariff Regulations provide for allowing an increase in O&M expenses (which include R&M expenses) in proportion to the increase in WPI over the year. The base R&M expenses of Rs. 361.17 crore, include approved R&M expenses of Rs. 341.03 crore for FY 2008-09 and an amount of Rs. 20.14 crore being R&M expenses allowed on fixed assets added during FY 2008-09. The average percentage increase in WPI for FY 2009-10 works out to 3.85%. The Commission recognising that this increase is reflective of a global recessionary trend, deems it prudent to allow an increase of 5%, similar to the approach adopted while reviewing FY 2009-10 in the Tariff Order for FY 2010-11. Thus, after allowing a WPI increase of 5% for the year over the base R&M expenses of Rs. 361.17 crore, the allowable R&M expenses work out to Rs. 379.23 crore for assets of Rs. 18,490.12 crore as on April 1, 2009, as determined by the Commission after taking into account the Audit Note.

2.12.4 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. As per audited accounts for FY 2009-10, fixed assets added during the year are valued at Rs. 2,014.48 crore. However, as per Audit Note appended to the Annual Statement of Accounts, this amount is understated to the extent of Rs. 4.25 crore. Thus, the value of fixed assets works out to Rs. 2,018.73(2,014.48+4.25) crore. Out of these additions of Rs. 2,018.73, fixed assets worth Rs. 1,322.65 crore were commissioned on January 25, 2010 (GHTP stage II). Thus, R&M expenses on Rs. 1,322.65 crore of assets would be allowable only for 66 days on pro-rata basis as per Regulations. The dates of commissioning for balance assets amounting to Rs. 696.08 crore are neither available in the accounts nor in the ARR Petition of the Board. Therefore, R&M expenses for these balance

assets added during the year are being considered assuming that these assets remained in service of the Board for six months on an average during FY 2009-10. The average percentage rate of R&M expenses of Rs. 379.23 crore for assets of Rs. 18,490.12 crore works out to 2.05% ($379.23/18,490.12 \times 100$). By applying the average rate of 2.05% on addition of assets of Rs. 1322.65 crore for 66 days and on balance assets of Rs. 696.08 crore for half year, the allowable R&M expenses for the fixed assets added during the financial year works out to Rs. 12.03 crore. Thus, allowable R&M expenses for FY 2009-10 work out to Rs. 391.26 ($379.23+12.03$) crore.

However, the Commission allows R&M expenses of Rs. 378.16 crore for FY 2009-10 as claimed by PSPCL on behalf of the Board.

2.13 Administration and General (A & G) Expenses

2.13.1 In the Tariff Order for FY 2009-10, the Commission approved A&G expenses of Rs. 76.00 crore. In the review for FY 2009-10, these expenses were approved at Rs. 75.95 crore being net of capitalization of Rs. 20.00 crore as claimed by the Board.

2.13.2 In the ARR Petition for FY 2011-12, PSPCL has claimed A&G expenses of Rs. 75.41 crore, net of capitalisation of Rs. 20.31 crore for FY 2009-10. As per the audited accounts of the Board, the A&G expenses for FY 2009-10 are Rs. 95.72 crore (gross). The net expenses for the year work out to Rs. 75.41 crore after reducing capitalized expenses of Rs. 20.31 crore.

2.13.3 Regulation 28 of the PSERC Tariff Regulations provides for allowing annual increase in the approved O&M expenses (which include A&G expenses) based on average increase in WPI over the year. The average percentage increase in WPI for FY 2009-10 works out to 3.85%. The Commission, recognising that this increase is reflective of a global recessionary trend, deems it prudent to allow an increase of 5%, similar to the approach adopted while reviewing FY 2009-10 in the Tariff Order for FY 2010-11. The base A&G expenses for FY 2009-10 work out to Rs. 75.20 ($70.96+4.24$) crore, which include approved A&G expenses of Rs. 70.96 crore for FY 2008-09 and an amount of Rs. 4.24 crore being A&G expenses allowed on fixed assets added

during the year. Accordingly, after allowing an increase of 5% over the base A&G expenses of Rs. 75.20 crore, expenses allowable for FY 2009-10 work out to Rs. 78.96 crore for assets valued at Rs. 18,490.12 crore as on 1st April, 2009. The average percentage rate of allowable A&G expenses works out to 0.43%, i.e., $(78.96/18,490.12 \times 100)$.

2.13.4 The Commission has adopted the same principle for allowing A&G expenses for fixed assets added during the financial year as has been applied to R&M expenses. Accordingly, the average rate of 0.43% is applied to the additional assets of Rs. 2,018.73 (1,322.65+ 696.08) crore added during FY 2009-10 for arriving at allowable A&G expenses of Rs 2.53 crore. Thus, allowable A&G expenses for the financial year work out to Rs. 81.49 (78.96+2.53) crore for FY 2009-10 against which, PSPCL has claimed expenses of Rs. 75.41 crore on actual basis on behalf of the Board.

The Commission, therefore, approves A&G expenses of Rs. 75.41 crore for FY 2009-10 as claimed by PSPCL on behalf of the Board.

2.14 Depreciation Charges

2.14.1 In the Tariff Order for FY 2009-10, the Commission approved depreciation charges of Rs. 826.02 crore against the Board's estimation of Rs. 969.99 crore. In the review, the Commission approved depreciation charges of Rs. 791.10 crore in the Tariff Order for FY 2010-11.

2.14.2 As per the audited accounts of the Board for FY 2009-10, total depreciation charges are Rs. 797.01 crore, which are net of capitalized depreciation of Rs. 1.86 crore for FY 2009-10.

The Commission therefore, approves Depreciation charges of Rs. 797.01 crore for FY 2009-10.

2.15 Interest and Finance Charges

2.15.1 In the ARR Petition for FY 2009-10, the Board claimed Interest and Finance charges of Rs. 1,585.61 crore for FY 2009-10, against which the Commission approved an amount of Rs. 1,048.57 crore. In the ARR Petition for

FY 2010-11, the Board revised the net Interest and Finance charges for FY 2009-10 to Rs. 1,624.54 crore, against which the Commission approved the Interest and Finance charges at Rs. 1,082.38 crore for FY 2009-10. The amount of Interest and Finance charges (net of capitalisation) claimed as per audited accounts for FY 2009-10 is Rs. 1,329.61 crore.

The Interest and Finance charges allowable to the Board are discussed in the succeeding paragraphs.

2.15.2 Investment Plan

In the Tariff Order for FY 2009-10, the Commission had approved an Investment Plan of Rs. 2,000 crore. In the review, the Commission revised the Investment Plan to Rs. 1,800 crore keeping in view the actual capital expenditure of Rs. 1,476.44 crore upto January 31, 2010. However, in the ARR for FY 2011-12, PSPCL has claimed an investment of Rs. 1,612.31 crore for FY 2009-10, on behalf of the Board, which is allowed. The Commission notes that the audited accounts exhibit receipt of grants and subsidies of Rs. 93.52 crore towards cost of capital assets. Besides, the Board had also received consumer contribution of Rs. 341.02 crore during FY 2009-10. Thus, the Board's actual capital loan requirement is reduced to Rs. 1,177.77 [1,612.31 – (93.52+341.02)] crore for FY 2009-10.

In the ARR for FY 2011-12, interest on loans availed by the Board for FY 2009-10 is depicted at Rs. 843.50 crore, out of which Rs. 37.61 crore pertains to Rajpura Thermal Power Plant (Nabha Power Ltd) and interest of Rs. 141.78 crore pertains to GPF. Also PSPCL in its Memo No 1389/CC/DTR/232/Deficiencies dated March 10, 2011, has submitted that the opening balance of loan for FY 2009-10 includes Rs. 6.98 crore loan availed by PSPCL for Gidderbaha Power Ltd. (GPL). The closing balance of loan for FY 2009-10 also includes Rs. 8.73 crore loan by PSPCL for Gidderbaha Power Ltd. (GPL), the interest pertaining to which works out to Rs. 1.12 crore. This is disallowed by the Commission, as the Gidderbaha Project was being developed on BOO basis during FY 2009-10. Thus, the interest on allowable loans (other than WCL and GoP loans) is Rs. 649.11 crore as given in Table 2-10.

**Table 2-10: Interest on Loans (other than WCL and GoP Loans) - FY 2009-10
(Rs. crore)**

Sr. No.	Particulars	Loans as on April 1, 2009	Receipt of Loan during FY 2009-10	Repayment of Loan during FY 2009-10	Loans as on March 31, 2010	Amount of Interest
1	2	3	4	5	6	7
1	As per data furnished in ARR (other than WCL and GoP Loans)	6323.23	1455.46	837.45	6941.24	662.99
2	Approved by the Commission (other than WCL and GoP Loans)	6323.23	1177.77	837.45	6663.55	649.11

2.15.3 As per the audited accounts of the Board, Government of Punjab (GoP) loans of Rs. 1,660.50 crore as on March 31, 2009 decreased to Rs. 520.07 crore by March 31, 2010, as loans of Rs. 1,140.43 crore were recalled by GoP on March 10, 2010. Interest payable on the loan amount works out to Rs. 210.62 crore for FY 2009-10. The Commission observes that the Board has not claimed any interest payable on GoP loans, in the audited accounts for FY 2009-10. The Commission has, however, considered interest of Rs. 210.62 crore for GoP loans on accrual basis in order to arrive at the gross interest payable in FY 2009-10. However, after adjusting Rs. 140.40 crore disallowed on account of diversion of capital funds for revenue purposes as discussed in para 2.15.9, an amount of Rs. 70.22 crore is determined as interest payable on GoP loans. This is discussed at length in para 2.15.9.

2.15.4 The Commission observes that the Board has claimed an amount of Rs. 1.37 crore under 'Interest & Finance Charges', being discounts allowed to the consumers for advance payment of bills. However, as this amount is being utilized by the Board for its revenue expenditure, its requirement of working capital is thus, set off to this extent. Therefore, the Commission does not approve any interest on this account.

2.15.5 In the Tariff Order for FY 2009-10, the Commission approved interest of Rs. 179.70 crore as interest on normative Working Capital Loan (WCL) of Rs. 1,466.92 crore for the year. This expenditure was revised to Rs. 200.95 crore on normative working capital of Rs. 1,640.39 crore. In the ARR of FY 2011-12, PSPCL has claimed interest of Rs. 644.03 crore for the working

capital. However, the allowable working capital loans admissible on normative basis are as shown in Table 2-11 below:

Table 2-11: Working Capital Requirement and Interest - FY 2009-10
(Rs. crore)

Sr. No.	Particulars	Amount
1	Two months Fuel Cost	591.09
2	One month Power Purchase Cost	384.75
3	One month Employee Cost	187.63
4	One month A&G Cost	6.28
5	One month R&M Cost	31.51
6	Maintenance Spare @ 15% of O&M expense	405.77
7	Total Working Capital Required	1607.03
8	Short Term PLR as on April 01, 2009	12.25%
9	Interest on Working Capital Loan	196.86

2.15.6 The allowable working capital loans work out to Rs. 1,607.03 crore on normative basis on which interest charges work out to Rs. 196.86 crore at an interest rate of 12.25%, which was the PLR of SBI as on April 01, 2009. Accordingly, interest charges of Rs. 196.86 crore are allowed.

2.15.7 The Commission has also re-determined the diversion of capital funds for revenue purposes at Rs. 1,821.21 crore based on the Board's audited accounts for FY 2009-10 as given in Table 2-12:

Table 2-12: Diversion of Capital Funds - FY 2009-10

(Rs. crore)

Sr. No.	Particulars	Amount
1	Net Fixed Assets*	11624.99
2	Capital Work in Progress**	2709.43
3	Inventory at Construction Stores	171.93
4	Total	14506.35
5	Less: Consumer Contribution, Grants & subsidy towards cost of capital asset	3704.95
6	Balance Capital Base (4-5)	10801.40
7	Requirement of Loan + Equity	10801.40
8	Average GoP Loan for the Financial Year	1090.29
9	Other Loans	8471.49
10	Equity	2946.11
11	SBI Bonds	637.35

Sr. No.	Particulars	Amount
12	GPF Utilised by Board	114.72
13	Actual Loans + Equity (8+9+10+11+12)	13259.96
14	Less: Capital Base	10801.40
15	Amount Diverted	2458.56
16	Less: Bonds for which debt servicing under-taken by GoP	637.35
17	Balance Diverted Amount	1821.21
18	Interest @ 13.20% per annum	240.40

**This figure is worked as Rs. 11,624.99(11,562.39+54.97+3.39+2.98-3.93+5.20) crore after taking into account the effect of Audit notes for FY 2008-09 and FY 2009-10, i.e, assets were understated by Rs. 54.97 crore, Rs. 3.39 crore in FY 2008-09 and Rs. 2.98 crore and Rs. 5.20 crore in FY 2009-10. Assets of Rs. 3.93 crore were overstated in FY 2009-10.*

***This figure is worked out as Rs. 2,709.43 (2,914.31-204.88) crore after taking into account the Audit notes of FY 2009-10, i.e. assets of Rs. 204.88 crore related to Irrigation Department of Shahpur Kandi.*

2.15.8 The diversion of capital funds for revenue purposes for the year works out to Rs. 2,458.56 crore out of which, debt servicing of SBI bonds of Rs. 637.35 crore will have no effect on interest charges of the Board as the same has been taken over by GoP. Therefore, the net diverted amount carrying interest liability is Rs. 1,821.21 crore on which interest works out to Rs. 240.40 crore at an average rate of 13.20% (being average rate of interest on GoP loans). This interest of Rs. 240.40 crore is being disallowed from the interest cost on account of diversion of capital funds for FY 2009-10.

2.15.9 The Commission retains its earlier decision to disallow interest cost of Rs. 100 crore out of this amount on account of deficiencies in the working of the Board and further decides that the balance disallowance of Rs. 140.40 crore is to the account of GoP. Accordingly, after adjustment of this disallowed interest of Rs. 140.40 crore against the interest due on GoP loans worked out as Rs. 210.62 in 2.15.3, net interest payable to GoP works out to Rs. 70.22 crore.

2.15.10 Interest on GP Fund

PSPCL has claimed an interest amount of Rs. 141.78 crore on behalf of the Board towards GP Fund accumulations. The interest of Rs. 141.78 crore on GP Fund, being a statutory payment, is allowed by the Commission.

2.15.11 Interest on Consumer Security Deposits

In the Tariff Order for FY 2010-11, interest on consumer security deposits for 2009-10 payable after March 31, 2010 was allowed at Rs. 164.21 crore as claimed by the Board since the audited accounts were not available at that time. However, the audited accounts for FY 2009-10 have become available now. The Commission accordingly allows interest to consumers at Rs. 82.06 crore as per audited accounts of the Board.

2.15.12 Finance Charges

In the Tariff Order for FY 2009-10, the Commission allowed finance charges of Rs. 5.53 crore applying a rate of 0.31% on the total borrowing requirement of Rs. 1,784.42 crore. In the review, the Commission approved finance charges of Rs. 4.38 crore by applying the same rate, i.e. 0.31% to the approved loans of Rs. 1,413.42 crore in the Tariff Order for FY 2010-11. In the ARR of FY 2011-12, PSPCL has claimed finance charges of Rs. 6.98 crore on behalf of the Board, for obtaining loans of Rs. 1,457.21 crore for FY 2009-10, which works out to 0.48% of the total loans claimed by PSPCL on behalf of the Board. Accordingly, the Commission allows finance charges of Rs. 6.98 crore on actual basis for FY 2009-10.

2.15.13 Capitalisation of Interest and Finance Charges

Against capitalisation of interest and finance charges of Rs. 57.82 crore approved in the Tariff Order of FY 2009-10, the Commission revised the capitalisation to Rs. 170.64 crore in the Tariff Order of FY 2010-11 based on the principle of capitalisation of interest (excluding interest on working capital) in the ratio of net work in progress to total capital expenditure. However, the Commission now approves capitalisation of Rs. 248.34 crore as per actual figures mentioned in the audited accounts of the Board for FY 2009-10.

2.15.14 Interest on Short Term Loans taken to replace recalled GoP Loans

As decided earlier by the Commission in paras 2.14.5 and 3.14.4 of the Tariff Order of FY 2010-11, interest on short term loans of Rs. 1,362.00 crore raised by the Board, to replace re-called GoP loans (adjusted against unpaid subsidy by GoP) is allowed. Interest on these short term loans is allowed at 9.59% per annum, equivalent to the average rate of interest on

short term loans claimed by PSPCL on behalf of the Board for FY 2009-10.
Thus, an interest amount of Rs. 130.62 crore is approved on this account.

2.15.15 The amount of Interest and Finance charges allowed/disallowed by the Commission are tabulated in Table 2-13 below:

Table 2-13: Interest and Finance Charges - FY 2009-10

(Rs. crore)

Sr. No.	Particulars	Interest as depicted in Accounts	Interest payable on GoP Loans not included in audited accounts of FY 2009-10	Amount disallowed by the Commission	Amount allowed by the Commission
1	2	3	4	5	6
1	Interest on Institutional Loans taken by the erstwhile Board	662.99	-	13.88	649.11
2A	Interest on Loans taken for Rajpura Thermal Power Plant (now Nabha Power Ltd)	37.61	-	37.61	-
2B	Interest on Loans taken for Gidderbaha Power Ltd. (GPL)	1.12	-	1.12	-
3	Interest payable on GoP Loans	-	210.62	-	210.62
4	Interest on Short Term Loans	130.62	-	-	130.62
5	Interest on GPF	141.78	-	-	141.78
6	Lease Rentals	0.003	-	-	0.003
7	Interest on Consumer Security Deposits	82.06	-	-	82.06
8	Discount to Consumers for Advance Payment of Bills	1.37	-	1.37	-
9	Sub-Total (1 to 8)	1057.55	210.62	53.98	1214.19
10	Interest on Working Capital Loans	513.41	-	316.55	196.86
11	Finance Charges	6.98	-	-	6.98
12	Total (9+10+11)	1577.94	210.62	370.53	1418.03
13	Less Capitalisation	248.34	-	-	248.34
14	Net Interest and Finance Charges (12-13)	1329.60	210.62	370.53	1169.69
15	Less: Interest disallowed on account of Diversion of Capital Funds (PSPCL – Rs. 100 crore and GoP – Rs. 140.40 crore)	-	-	-	240.40
16	Interest Allowed (14-15)	-	-	-	929.29

Accordingly, the Commission approves the net Interest and Finance charges of Rs. 929.29 crore for the FY 2009-10.

2.16 Return on Equity

In the Tariff Order for FY 2009-10, the Commission, in accordance with Regulation 25 of the PSERC Tariff Regulations, approved a Return on Equity of Rs. 412.46 crore calculated at 14% on an equity of Rs. 2,946.11 crore as on April 01, 2009. In the review, the Commission retained Return on Equity at Rs. 412.46 crore for that financial year. The Commission noted that the erstwhile Board has been unable to effect requisite improvement in critical performance parameters such as employee cost. Moreover, the erstwhile Board continued to be a loss making entity and any increase in RoE may not for that reason alone be justified. As per the annual accounts of the Board for FY 2009-10, GoP equity in the Board remained unchanged at Rs. 2,946.11 crore.

Accordingly, the Commission retains Return on Equity at Rs. 412.46 crore for FY 2009-10 as approved earlier.

2.17 Subsidy and Other Amounts Payable by GoP

2.17.1 As per the audited accounts for FY 2009-10, total subsidy of Rs. 3,144.25 crore has been paid by GoP to the Board. The subsidy payable by GoP is now trued up as under:

- **AP Consumption:** The Commission has considered AP consumption at 9,678 MU on which revenue @ 285 paise per unit works out to Rs. 2,758.23 crore. The consumers were not billed any amount on this account. Thus, Rs. 2,766.23 crore (inclusive of meter rentals and service charges of Rs. 8.00 crore) was payable by GoP as AP subsidy. GoP vide its decision dated January 22, 2010 has decided to charge Rs. 50 / BHP /Month from AP consumers. The Commission, in its Tariff Order for FY 2010-11 had observed that the revenue on this account would accrue to the erstwhile Board only during FY 2010-11 and as such its impact on subsidy would be considered in FY 2010-11.
- **Scheduled Castes (SC) Domestic Supply (DS) Consumers:** The Commission notes that as per the earlier decision of GoP, Scheduled Castes DS consumers with a connected load of up to 1,000 watts were to be given free power up to 200 units per month. However, as per decision dated January 22, 2010 of GoP, subsidy now available has been reduced

to 100 units per month for this category of consumers. PSPCL has claimed subsidy of Rs. 298.58 crore besides meter rentals and service charges of Rs. 13.13 crore on this account. Thus, Rs. 311.71 crore (inclusive of meter rentals and service charges of Rs. 13.13 crore) is computed by the Commission as subsidy on this account.

- **Non-SC Below Poverty Line (BPL) Consumers:** GoP had also decided to give free supply of power upto 200 units per month to Non-SC BPL DS consumers with connected load upto 1,000 watts. However, as per decision dated January 22, 2010 of GoP, subsidy now available has been reduced to 100 units per month for this category of consumers also. PSPCL has claimed subsidy of Rs. 4.12 crore inclusive of meter rentals and service charges of Rs. 0.17 crore on this account. Thus, Rs. 4.12 (inclusive of meter rentals and service charges of Rs. 0.17 crore) is computed by the Commission as subsidy on this account.

2.17.2 On the above basis, total subsidy payable by GoP for FY 2009-10 works out to Rs. 3,082.06 (2,766.23+311.71+4.12) crore.

Thus, subsidy of Rs. 3,082.06 crore is now determined as payable by GoP to the Board for FY 2009-10, against subsidy of Rs. 3,144.25 crore already paid.

2.18 Interest on Delayed Payment of Subsidy

2.18.1 GoP has paid subsidy due to the Board in FY 2009-10 initially in staggered monthly instalments and subsequently by adjusting a loan amount of Rs. 1,140.43 crore and Rs. 270.22 crore of ED payable by the Board to GoP. However, the Commission has observed that not only has there been delay in payment of subsidy to the Board but the same has not been paid at the beginning of the month for which it is due as specified by the Commission in para 6.4.2 of the Tariff Order for FY 2009-10. In accordance with past practice, the Commission, with a view to compensating the Board on this account, levies interest on the delayed payment of subsidy @ 9.59% (effective interest rate on short term loans as per the ARR of PSPCL) which now works out to Rs. 50.09 crore for FY 2009-10.

2.18.2 Accordingly, the subsidy payable for FY 2009-10, inclusive of interest on delayed payment of subsidy, determined as payable by GoP to PSPCL is Rs. 3,132.15 (3,082.06+50.09) crore. However, total amount paid /adjusted towards subsidy component by GoP in FY 2009-10 is Rs. 3,144.25 crore. Accordingly, there is an excess payment of Rs. 12.10 crore on this account.

The Commission in para 2.16.4 of the Tariff Order for FY 2010-11, had determined the excess payment of subsidy of Rs. 181.45 crore up to FY 2008-09. Thus, the total amount of subsidy paid in excess up to FY 2009-10 works out to Rs. 193.55 (181.45+12.10) crore. This has been carried forward to para 6.4.4.

Besides this, the Government is liable to pay an amount of Rs. 276.23 crore as discussed in paras 2.14.12 and 2.16.4 of Tariff Order for FY 2010-11, on account of non-refund of excess interest paid by the Board. The Commission has been emphasising the importance of reducing amounts other than subsidy that are payable to the Board. This is imperative in the context of the mounting debt of the Board and its precarious financial position. As discussed in para 2.15.3 and 2.15.9 above, net amount due on GoP loans for FY 2009-10 is Rs. 70.22 crore. This amount is being adjusted against the non refunded amount of Rs. 276.23 crore, after which the net amount payable to the Board by GoP works out to Rs. 206.01 crore. This is carried forward to para 3.15.

2.19 Prior Period Expenses

In its ARR Petition for FY 2011-12, the Board has claimed prior period expenses of Rs. 150.70 crore being payments pertaining to the previous years but made during FY 2009-10. The annual accounts also reflect prior period expenses as Rs. 150.70 crore which include Rs. 5.48 crore on account of employee cost. The Board has not intimated the period to which the expenses on account of employee cost pertain. These expenses are disallowed assuming that these expenses pertain to the period during which the employee cost of the Board remained capped. Further, the Board has also claimed Rs. 30.46 crore on account of Fuel related losses and expenses. These expenses also are disallowed as the Commission has allowed the fuel cost for the preceding years on normative basis. The Commission also

observes that there has been a claim of Rs. 75.32 crore in the audited accounts in respect of Interest and Finance charges under prior period expenses. In this regard, in response to a query by the Commission, PSPCL has submitted that out of total prior period interest expenses of Rs. 75.32 crore, Rs. 74.92 crore pertain to interest amount claimed to have been paid in excess to GoP. The Commission is of the view that it has been allowing interest on GoP loans to the Board on accrual basis even though the same had neither been claimed in the ARR nor in the audited accounts. Moreover, the Commission has determined excess interest paid by the Board to GoP in its Tariff Order for FY 2009-10 and FY 2010-11. It has also held the amount is payable by GoP to the Board. A similar determination has been made in para 2.18.2 of this Tariff Order. The Commission, therefore, finds no merit in allowing any further interest on this account under the head of prior period expenses.

Accordingly, the Commission approves prior period expenses of Rs. 39.44 (150.70 – 30.46–5.48–75.32) crore for FY 2009-10.

2.20 Other Debits and Extraordinary Items

The annual accounts of the Board for FY 2009-10 show 'other debits and extraordinary items' at Rs. 5.15 crore. However, as per Audit Note appended to the Annual Statement of Accounts, these are understated by Rs. 18.10 crore. Thus, the total Other Debits and Extraordinary Items work out to Rs. 23.25 (5.15+18.10) crore.

Therefore, the Commission allows the expenditure of Rs. 23.25 crore for FY 2009-10 on this account.

2.21 Fringe Benefit Tax (FBT)

The annual accounts of the Board indicate that Rs. 0.79 crore was paid as Fringe Benefit Tax (FBT), which is the same as claimed by the PSPCL in the ARR Petition for FY 2011-12.

This being a statutory payment, the Commission approves the amount of Rs. 0.79 crore for FY 2009-10.

2.22 Non-Tariff Income

2.22.1 The Commission approved non-tariff income of Rs. 444.03 crore for FY 2009-10 in the Tariff Order of FY 2009-10. This was increased to Rs. 448.60 crore in the Tariff Order of FY 2010-11.

2.22.2 As per the audited accounts of the Board for FY 2009-10, the 'other income' of the Board is Rs. 371 crore. This non-tariff revenue does not include non-tariff income of Rs. 116.10 crore on account of meter rentals and service charges (Rs. 75.12 crore), wheeling charges (Rs. 8.15 crore) and miscellaneous charges other than peak load exemption charges (Rs. 32.83 crore). Thus, Non-Tariff Income amounts to Rs. 487.10 crore. Besides, an income of Rs. 115.12 crore on account of recoveries for theft of power is also treated as a part of non-tariff income. Adding this to the other income submitted in the audited accounts of the Board, the total non tariff income works out to Rs. 602.22 crore. In addition, the subsidy of Rs. 8.00 crore for AP consumers and Rs. 13.30 crore for SC and Non-SC BPL Domestic Supply consumers has been received from GoP on account of meter rentals and service charges, which also forms part of non tariff income for FY 2009-10. Taking these receipts into account, the non-tariff income of the Board for the year works out to Rs. 623.52 crore. However, PSPCL in its letter dated March 03, 2011, has submitted that interest of Rs. 55.49 crore has been paid by Nabha Power Ltd. (NPL) to PSEB during FY 2009-10, and stood included in non-tariff income. PSPCL has also made a plea that as interest on loans to SPVs are disallowed by the Commission, interest recovered from SPVs, which stood included in Non-Tariff Income, may also be excluded. The Commission notes that a similar plea was made in the last ARR as well as the Review Petition No. 23 of 2010. However, the Commission could not allow the claim in the absence of evidence to substantiate this plea. However, PSPCL has now submitted copies of TDS certificates in support of receipt of interest from NPL along with letters from NPL confirming the said payment. The Commission, observes that as it has not allowed any interest on loans availed by erstwhile Board for NPL, the interest recovered from NPL for repayment of loans to financial institutions need also not be considered in the non-tariff income of PSPCL. Accordingly, interest of Rs. 55.49 crore recovered from NPL is reduced from the non-tariff income.

The Commission accordingly, approves Non-Tariff Income at Rs. 568.03 crore for FY 2009-10.

2.23 Revenue from Sale of Power

2.23.1 The Commission approved the revenue from tariff at Rs. 11,475.24 crore in the Tariff Order for FY 2009-10. In the review, the revenue from sale of power was revised to Rs. 12,784.67 crore, inclusive of GoP subsidy.

2.23.2 In the audited accounts for FY 2009-10, the revenue actually received from sale of power is Rs. 8,694.71 crore excluding GoP subsidy. This revenue includes non-tariff income of Rs. 231.22 crore on account of meter rentals and service charges (Rs. 75.12 crore), recoveries for theft of power/malpractices (Rs. 115.12 crore), wheeling charges (Rs. 8.15 crore) and miscellaneous charges other than peak load exemption charges (Rs. 32.83 crore). These receipts have been accounted for in the non-tariff income and are hence deducted from the head 'revenue from sale of power'. Therefore, net revenue from sale of power works out to Rs. 8,463.49 [8,694.71-(75.12+115.12+8.15+32.83)] crore. Besides, the Board had received subsidy of Rs. 3,144.25 crore. However, subsidy of Rs. 3082.06 crore determined as payable for FY 2009-10 in para 2.17 of this Tariff Order includes an amount of Rs. 21.30 crore related to meter rentals and service charges, which is a part of non-tariff income for the year. Accordingly, after adding subsidy of Rs. 3,060.76 (3,082.06-21.30) crore paid by GoP to the Board, total revenue from sale of power amounts to Rs. 11,524.25 (8,463.49+3,060.76) crore.

The Commission, therefore, approves the revenue from existing tariff at Rs. 11,524.25 crore for energy sales of 31,425 MU for FY 2009-10.

2.24 True up of ARR for FY 2009-10

In view of the above analysis, the true up revenue requirement for FY 2009-10 is as per details given in Table 2-14.

Table 2-14: Revenue Requirement - FY 2009-10

(Rs. crore)

Sr. No.	Item of Expense	Approved by the Commission in T.O. FY 2009-10	Approved by the Commission in review in T.O. of FY 2010-11	Actual as per Annual Accounts	Now Approved by the Commission
1	2	3	4	5	6
1	Cost of fuel	3195.93	3414.58	3621.85	3546.52
2	Cost of power purchase	4746.59	4969.65	4653.19	4617.00
3	Employee cost	1856.60	2354.48	2496.71	2251.55
4	R&M expenses	376.14	385.93	381.14	378.16
5	A&G Expenses	76.00	75.95	75.41	75.41
6	Depreciation	826.02	791.10	797.01	797.01
7	Interest & finance charges	1048.57	1082.38	1329.60	929.29
8	Return on Equity @ 14%	412.46	412.46	676.52	412.46
9	Prior period expenses/(Income)	-	-	150.70	39.44
10	Other Debits and Extraordinary items	-	-	5.15	23.25
11	Fringe Benefit Tax	-	-	0.79	0.79
12	Total revenue requirement	12538.31	13486.53	14188.07	13070.88
13	Additional Incentive for Higher Thermal Generation				83.59
14	Additional Incentive for Lower T&D Loss				39.29
15	Additional Fuel Cost allowed for Trial Run of GHTP Stage II for 2008-09				*84.04
	Add Consolidated Gap for 2008-09 & 2007-08	471.08	977.37		
16	Gross Revenue Requirement	13009.39	14463.90	14188.07	13277.80
17	Less: Non Tariff Income	444.03	448.60	602.22	568.03
18	Net revenue requirement	12565.36	14015.30	13585.85	12709.77
19	Carrying cost of gap	209.96			
20	Revenue from Existing Tariff	11475.24	12784.67	11607.79	11524.25
21	Gap: surplus (+)/ deficit (-)	(-)1300.08	(-)1230.63	(-) 1978.06	(-) 1185.52
22	Gap: surplus (+)/ deficit (-) for 2008-09				(-) 977.37
23	Total Consolidated Gap: surplus (+)/ deficit (-)				(-) 2162.89
24	Energy Sales	32822	32591	32698	31425

* As per Order dated 06.01.2011 of the Commission of Petition No. 23 of 2010.

From the true up for FY 2009-10, it is noted that there is a gap (deficit) of Rs. 1,185.52 crore against a gap (deficit) of Rs. 253.26 crore determined

earlier by the Commission in the Review of FY 2009-10 in the Tariff Order dated April 23, 2010. After adding a cumulative gap of Rs. 977.37 crore for FY 2008-09 the total gap (deficit) works out to Rs. 2,162.89 crore which is being carried forward for adjustment in the next financial year.

Chapter 3

Review for FY 2010-11

3.1 Background

The Tariff Order of the Commission for the Board for FY 2010-11 contained its approvals of costs and revenue projections based on the composite Board's estimates for different items of costs to be incurred and revenue likely to accrue during the year. Now, as the Board has been unbundled into two successor entities i.e. PSPCL and PSTCL; PSPCL entrusted with Generation, Trading and Distribution functions and PSTCL entrusted with Transmission function (including State Load Despatch and STU functions), the total expenses were apportioned between these two entities, based on the functions entrusted.

However, there are certain items of cost like Fuel cost, Power Purchase cost etc which can be completely attributable to PSPCL whereas the other costs like Employee cost, R&M expenses, A&G expenses, Depreciation, Interest and Finance Charges and Return on Equity, etc of the composite Board are to be distributed between the two successor entities, i.e. PSPCL and PSTCL. PSPCL in its ARR Petition for FY 2011-12 has submitted the revised estimates of costs and revenue pertaining to Generation, Trading and Distribution functions, for FY 2010-11.

The Commission considers it appropriate and fair to re-visit and review the approvals granted by it for the Generation and Distribution Functions of the Board in the Tariff Order for FY 2010-11 with reference to the revised estimates now made available by PSPCL, but without altering the principles and norms adopted earlier. These matters are discussed in the succeeding paragraphs.

3.2 Energy Demand (Sales)

3.2.1 Metered Energy Sales

The Commission in the Tariff Order for FY 2010-11 approved metered energy sales within the State at 22,433 MU as against 22,704 MU projected

by the Board. PSPCL, in the ARR Petition for FY 2011-12, has re-estimated the metered energy sales for FY 2010-11 at 21,977 MU.

PSPCL has re-estimated energy sales to metered categories for FY 2010-11 on the basis of actuals for the first 6 months (April 2010 to Sept 2010) and by applying category-wise (except for Large Supply category) half-yearly 3 year compounded annual growth rate (CAGR) of second half of the period from FY 2006-07 to FY 2009-10, to the corresponding actual category-wise sales in the second half of FY 2009-10. PSPCL has deviated from the CAGR methodology for the Large Supply category as the consumers of this category have been opting for open access in a significant manner. PSPCL has submitted that during FY 2009-10, power imported by open access consumers was only 131 MU whereas the same is 595 MU in the first half of FY 2010-11. However, the actual sale to Large Supply consumers in the first half of FY 2010-11 grew by 9.97% from 4,157.5 MU in first half of FY 2009-10 to 4,572.29 MU. Given the exponential rise in the open access consumers, PSPCL has estimated the energy sale of 3,500 MU during second half of FY 2010-11, by reducing estimated open access sales of 1,800 MU and a correction factor of 565 MU from the sale of 4,735 MU calculated for the second half of FY 2010-11 based on 3 year CAGR of sales during the second half of the period from FY 2006-07 to FY 2009-10.

In response to the Commission's query regarding the basis for the correction factor of 565 MU considered by PSPCL for projecting sales to Large Supply category, PSPCL could not submit any satisfactory reply. The Commission is of the view that despite the increase in open access transactions by large supply consumers in first half of FY 2010-11, the sales to Large Supply category has increased by 9.97%, hence, there is no justification for agreeing to submission of PSPCL. Further, there is no basis for the projected increase in open access transactions from 595 MU in first half of FY 2010-11 to 1,800 MU in second half of FY 2010-11; hence, the Commission finds no rationale in this projection of PSPCL.

In the view of the above, the Commission has estimated sales to metered categories, including Large Supply category, on the basis of actual sales for the first 6 months of FY 2010-11 (April 2010 to Sept 2010) and by applying

category-wise half yearly CAGR of second half of the period from FY 2006-07 to FY 2009-10, to the corresponding actual category-wise sales of second half for FY 2009-10. Accordingly, the Commission works out the estimated sales to metered categories as 23,211 MU for FY 2010-11 as detailed in Table 3-1.

Table 3-1: Estimated Metered Energy Sales – FY 2010-11

(MU)

Sr. No.	Category	Sales during 2 nd half of FY 2006-07 (Actual)	Sales during 2 nd half of FY 2009-10 (Actual)	3 year CAGR during 2 nd half of FY 2006-07 to 2 nd half of FY 2009-10	Sales during 1 st half of FY 2010-11 (Actual)	Estimated sales during 2 nd half of FY 2010-11	Estimated sales for FY 2010-11 (6+7)
1	2	3	4	5	6	7	8
1	Domestic	2851	3640	8.48%	4213	3949	8162
2	Non- Residential	849	1069	7.98%	1247	1154	2401
3	Small Power	371	398	2.37%	406	407	813
4	Medium Supply	820	842	0.89%	860	849	1709
5	Large Supply	4354	4637	2.12%	4572	4735	9307
6	Public Lighting	70	75	2.33%	57	77	134
7	Bulk Supply	228	255	3.80%	258	265	523
8	Railway Traction	52	75	12.98%	77	85	162
9	Total Metered sales	9595	10991		11690	11521	23211

The Commission has retained sales to common pool consumers at 303 MU as projected by the PSPCL. PSPCL has provided data on outside State sales during FY 2010-11 along with the additional information submitted by it on February 2, 2011, as 254 MU. The Commission notes that this includes Himachal Pradesh's free share in RSD (72 MU) and HP royalty in Shanar (53 MU). The same is required to be excluded from the outside State sales, in view of the practice followed by the Commission in the previous Tariff Orders. Therefore, the Commission considers the outside State sales of 129 MU (254-72-53) and common pool sale of 303 MU.

3.2.2 The metered energy sales projected by the PSPCL during determination of ARR for FY 2010-11, approved by the Commission in the Tariff Order for FY 2010-11, the revised estimates furnished by the PSPCL and metered energy sales now approved by the Commission, are given in Table 3-2.

Table 3-2: Metered Energy Sales – FY 2010-11**(MU)**

Sr. No.	Category	Projected by PSEB in ARR for FY 2010-11	Approved by Commission in T. O. for FY 2010-11	Revised estimates of PSPCL in ARR for FY 2011-12	Now Approved by Commission
1	2	3	4	5	6
1	Domestic	7894	7865	8161	8162
2	Non- Residential	2355	2405	2401	2401
3	Small Power	784	759	814	813
4	Medium Supply	1639	1541	1709	1709
5	Large Supply	9212	9093	8072	9307
6	Public Lighting	157	136	134	134
7	Bulk Supply	508	496	523	523
8	Railway Traction	155	138	161	162
9	Total Metered sales within the State	22704	22433	21977*	23211
10	Common Pool	302	302	303	303
11	Outside State Sales	125	53	254	129
12	Total sales (9+10+11)	23131	22788	22534	23643

**Wrongly depicted by PSPCL in the ARR Petition against actual sum total of 21,975 MU*

Accordingly, metered sales of 23,211 MU within the State, common pool sale of 303 MU and outside State sales of 129 MU are now approved by the Commission as per details shown in Table 3-2.

3.2.3 AP Consumption

The Commission, in its Tariff Order for FY 2010-11, approved AP consumption of 10,305 MU after applying increase of 5% over the consumption of 9,814 MU approved for FY 2009-10. In its ARR Petition for FY 2011-12, PSPCL has revised the estimate of AP consumption to 10,898 MU for FY 2010-11, which includes the metered AP Consumption of 95 MU in first half of FY 2010-11.

PSPCL has revised the AP consumption for FY 2010-11 based on the actual AP consumption during the first half of FY 2010-11 (April '2010 to September '2010) and estimation for second half of FY 2010-11. For estimation of AP consumption for second half of FY 2010-11, PSPCL has considered a growth rate of 8.45% (based on last 3 year CAGR of sales during second half of the period from FY 2006-07 to FY 2009-10). PSPCL has applied this growth rate

to the actual AP consumption during second half of FY 2009-10 to arrive at the AP consumption for the second half of FY 2010-11.

The Commission, in its continuing endeavor towards fine tuning the methodology for computing AP consumption, has analysed the AP consumption data received from PSPCL from April 2010 to September 2010 and has observed that PSPCL has reported excess consumption during the period from April, 2010 to September, 2010 i.e first half of FY 2010-11, by 4.03%.

Based on excess consumption of 4.03% for the first six months of FY 2010-11, the Commission has deducted the AP Consumption reported by PSPCL for the first half of FY 2010-11 by 4.03%. For estimating the AP consumption during the second half of FY 2010-11, the Commission decides to apply the 5% increase over the AP consumption of 3,798 MU approved by the Commission for second half of FY 2009-10. Accordingly, the Commission determines the AP Consumption of 10,327 MU for FY 2010-11 as shown in Table 3-3:

Table 3-3: AP Consumption – FY 2010-11

(MU)				
Particulars	AP Consumption reported by PSPCL for FY 2009-10	AP Consumption Approved by the Commission for FY 2009-10	AP Consumption reported by PSPCL for FY 2010-11	Now Approved by the Commission
1	2	3	4	5
First half (April to September)	6548	5880	6605	6339
Second half (October to March)	3957	3798	4293	3988
Total	10505	9678	10898	10327

Thus, the Commission approves the AP consumption of 10,327 MU for FY 2010-11.

3.3 Transmission and Distribution Losses (T&D Losses)

The Board, in its ARR Petition for FY 2010-11, had projected the T&D losses of 18%. The Commission, however, after considering the whole issue, fixed the T&D losses at 20% for FY 2010-11 in its Tariff Order for that year.

PSPCL, in its ARR Petition for FY 2011-12, has projected the T&D losses for FY 2010-11 at 18%, considering AP consumption of 10,898 MU for FY 2010-11. Since, post unbundling, the functions of transmission and distribution have been entrusted to separate entities, i.e., PSTCL and PSPCL, respectively, the Commission is of the view that T&D losses reported now should be segregated into transmission losses and distribution losses. In reply to the Commission's query, PSPCL, in its letter dated February 2, 2011 has submitted that boundary metering between the assets of PSPCL and PSTCL is not complete, and in such a situation segregation of transmission losses and distribution losses is not possible for the time being.

The Commission takes note of the practical difficulties for segregation of transmission losses and distribution losses. However, since the Board has been unbundled into separate entities, transmission losses and distribution losses are to be separately considered and approved for these entities. Considering this as a transition phase, the Commission decides to stipulate only target T&D losses, with segregation into transmission loss and distribution loss within the overall target, pending final adjustments between PSTCL and PSPCL based on actual data at a later stage.

Keeping the overall T&D loss level of 20% as approved for FY 2010-11 in the Tariff Order for FY 2010-11 and based on the provisionally approved Transmission loss of 2.5% for PSTCL for FY 2010-11 in Tariff Order for PSTCL for FY 2011-12, the target distribution loss (66 kV and below) for PSPCL for FY 2010-11 works out to 17.95%, which the Commission approves provisionally. The Commission would however, revisit the distribution losses of PSPCL while undertaking the Truing-up for FY 2010-11.

3.4 Energy Requirement

- 3.4.1 The total energy requirement to meet the demand of the system is the sum of estimated metered energy sales including common pool and outside State sales, estimated AP sales and T&D losses. The total energy requirement for FY 2010-11 projected during determination of ARR for FY 2010-11, approved by the Commission in the Tariff Order, revised estimates furnished by PSPCL

in the ARR Petition for FY 2011-12, and now approved by the Commission is given in Table 3.4.

Table 3-4: Energy Requirement - FY 2010-11

(MU)					
Sr. No.	Particulars	Projected by the Board during ARR for FY 2010-11	Approved by the Commission in T.O. for FY 2010-11	Revised estimate by PSPCL in ARR for FY 2011-12	Now approved by the Commission
1	2	3	4	5	6
1	Metered Sales within State	22704	22433	21977	23211
2	AP consumption	11245	10305	10898	10327
3	Total sales within State (1+2)	33949	32738	32875	33538
4	Common pool sales	302	302	303	303
5	Outside State sales	125	53	254	129
6	Total Sales (3+4+5)	34376	33093	33432	33970
7 (a)	T&D losses on Sr. No. 3 (in %)	18.00%	20.00%	18.00%	20.00%
7 (b)	T&D losses on Sr. No. 3 (in MU)	7452	8185	7216	8385
8	Total energy input required [6+7(b)]	41828	41278	40648	42355
9	Energy at Transmission Periphery to be sold within the State (8-4-5)				41923
10 (a)	Transmission Loss (in %)				2.5%
10 (b)	Transmission Loss (in MU)				1048
11	Energy available to PSPCL [9-10(b)]				40875
12 (a)	Distribution Loss (in %)				17.95%
12 (b)	Distribution Loss (in MU)				7337
13	Energy available for Sale to consumers within State [11-12(b)]				33538

3.4.2 The revised energy requirement for FY 2010-11 with T&D losses of 20% is determined as 42,355 MU, which has to be met from the PSPCL's own generation (thermal & hydel) including share from BBMB, purchases 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 2010-11 based on actual generation of the respective plants up to September 2010 and estimating the generation for

the second half of FY 2010-11 on the basis of the planned and forced outages of the respective plants during the second half of FY 2010-11.

3.5.2 The Commission has, however, obtained the actual gross and net generation of different stations up to February, 2011. The actual gross and net generation for the first eleven months of FY 2010-11 as supplied by PSPCL is summarized in Table 3.5 (A):

Table 3-5 (A): Gross & Net Thermal Generation from April 2010 to February 2011 (MU)

Sr. No	Stations	Gross generation	Net generation
1	2	3	4
1	GNDTP Unit I&II	1279	1141
2	GNDTP Unit III&IV	385	327
3	GGSSTP	8835	8116
4	GHTP	6146	5647
5	Total	16645	15231

3.5.3 As the actual station-wise generation for the eleven months of FY 2010-11 is available with the Commission, the Commission decides to determine the gross generation for the month of March, 2011 on prorata basis on the basis of actual gross generation for the first eleven months of FY 2010-11. The station-wise generation projected by the Board during determination of ARR for FY 2010-11, generation approved by the Commission in its Tariff Order for that year, revised estimates now supplied by the PSPCL, and the generation now approved by the Commission is given in Table 3-5 (B) below.

Table 3-5 (B): Thermal Generation - FY 2010-11

(MU)

Sr. No.	Station	Projected by PSEB in ARR for FY 2010-11		Approved by the Commission in T.O. for FY 2010-11		Revised Estimates by PSPCL in ARR for FY 2011-12		Now approved by the Commission	
		Gross	Net	Gross	Net	Gross	Net	Gross	Net
1	2	3	4	5	6	7	8	9	10
1 (a)	GNDTP Unit I & II	2280	2016	2509	2233	1818	1607	1395	1242
1 (b)	GNDTP Unit III & IV							420	374
2	GGSSTP	9500	8692	10254	9382	9500	8707	9638	8819
3 (a)	GHTP, Stage I	6565	5974	7276	6621	6659	6083	6705	6102
3 (b)	GHTP, Stage II								
4	Total	18345	16682	20039	18236	17977	16397	18158	16537

The Commission approves gross thermal generation for FY 2010-11 at 18,158 MU, against 17,977 MU projected by PSPCL in the ARR for FY 2011-12.

Auxiliary Consumption and Net Generation: The plant-wise auxiliary consumption projected by the Board during determination of ARR for FY 2010-11, auxiliary consumption approved by the Commission in the Tariff Order for FY 2010-11, the revised figures projected by PSPCL in the ARR Petition for FY 2011-12, and now approved by the Commission are given in Table 3-5 (C).

Table 3-5 (C): Auxiliary Consumption - FY 2010-11

Sr. No.	Station	Projected by PSEB in ARR for FY 2010-11	Approved by the Commission in T.O. for FY 2010-11	RE by PSPCL in ARR for FY 2011-12	Now approved by the Commission
1	2	3	4	5	6
1 (a)	GNDTP Unit I & II	11.60%	11.00%	11.55%	11.00%
1 (b)	GNDTP Unit III & IV				
2	GGSSSTP	8.50%	8.50%	8.65%	8.50%
3 (a)	GHTP, Stage I	9.00%	9.00%	8.35%	9.00%
3 (b)	GHTP, Stage II				

In the Tariff Order for FY 2010-11, 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 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 2010-11 at 11.00%, 8.50% and 9.00% for GNDTP, GGSSTP and GHTP respectively.

The revised estimate of auxiliary consumption reported by PSPCL is on the higher side as compared with the levels approved by the Commission, except for GHTP. PSPCL has submitted that the auxiliary consumption in case of GNDTP is inclusive of losses in the generator transformer, unit auxiliary transformers, station transformers and excitation power, BCW system, and cooling water system and has requested for allowing 12 % auxiliary consumption in view of the same being allowed by CERC for Tanda Thermal Station. The Commission observes that this issue stand already decided in

the Tariff Order for FY 2010-11 and there is no change in the position thereafter.

The Commission therefore, approves auxiliary consumption for GNDTP, GGSSTP and GHTP at the same level as already approved in the Tariff Order for FY 2010-11, i.e. at 11.00%, 8.50% and 9.00% respectively.

Net thermal generation on this basis has been worked out at 16,537 MU and has been shown in Table 3-5 (B) above.

- 3.5.4 **Hydel Generation:** The Board, in the ARR Petition for FY 2010-11, projected the net hydel generation including BBMB share at 8,746 MU for FY 2010-11. The Commission, in its Tariff Order for FY 2010-11, approved the net hydel generation including BBMB share at 8,685 MU. PSPCL, in its ARR Petition for FY 2011-12, has submitted the revised hydel generation at 8,730 MU.

PSPCL, in its ARR Petition for FY 2011-12, has submitted the revised estimates of gross own hydel generation of 4,325 MU. PSPCL, in letter dated February 16, 2011 has again revised the electricity generation from UBDC to 414 for FY 2010-11 on the basis of actual generation for the period from April 2010 to January 2011. The Commission, based on the revised figures of UBDC, works out the gross own hydel generation at 4,344 MU FY 2010-11. The Commission further observes that, in the approach followed in the previous Tariff Orders, the Commission has been deducting the HP share (free) in RSD and HP royalty in Shanana from the gross hydel generation, as these are not considered on sales side. In line with the principle adopted by the Commission in previous Tariff Orders, the Commission has now worked out net hydel generation for FY 2010-11 by deducting the auxiliary consumption, transformation losses, free HP share in RSD and HP royalty in Shanana, as 4,183 MU. The Commission approves the net share from BBMB as projected by PSPCL.

The station-wise generation projected by the Board in ARR for FY 2010-11, generation approved by the Commission in its Tariff Order for FY 2010-11, the revised estimates now submitted by the PSPCL in the ARR for FY 2011-12, and now approved by the Commission is given in Table 3-6.

Table 3-6: Hydel Generation – FY 2010-11

(MU)

Sr. No	Hydel Station	Projected by PSEB in ARR for FY 2010-11	Approved by Commission in T. O for FY 2010-11	RE by PSPCL in ARR for FY 2011-12	Now Approved by Commission
1	2	3	4	5	6
1	Shanan	522	523	565	565
2	UBDC Stage I	384	384	395	167
3	UBDC Stage II				247
4	RSD	1564	1564	1575	1575
5	MHP	1222	1222	1101	1101
6	ASHP	688	688	680	680
7	Micro Hydel	8	8	9	9
8	Gross Own Hydro	4388	4389	4325	4344
9	Auxiliary consumption and transformation loss (including RSD share and royalty in Shanan)	46	108	48	161 ¹
10	Net Own Hydro	4342	4281	4277	4183
PSPCL Share from BBMB					
11	PSPCL Share excluding Common Pool Share (Net)	4102	4102	4151	4151
12	Add Common pool share	302	302	303	303
13	Net Share from BBMB	4404	4404	4453	4454
14	Total Net Hydro (Own + BBMB)	8746	8685	8730	8637

1. Transformation losses @ 0.5% (22 MU), Auxiliary consumption @ 0.5% for RSD generation of 1,575 MU and UBDC Stage-1 generation of 167 MU (having static exciters) and @ 0.2% for others (14 MU), HP share @ 4.6% in RSD (72 MU) and Royalty to HP in Shanan (53MU).

The Commission, thus, approves revised hydel generation for FY 2010-11 at 4,183 MU (net) from own hydel stations and 4,454 MU (net) as share from BBMB as shown in Table 3-6 above.

3.6 Power Purchase

To meet the energy requirement, the Board had projected power purchase at 16,404 MU (net) in ARR for FY 2010-11. The Commission, in its Tariff Order for FY 2010-11, approved power purchase at 14,357 MU (net) for FY 2010-11.

PSPCL has now furnished revised estimates of power purchase for FY 2010-11 at 15,521 MU (net) in its ARR Petition for FY 2011-12. The approved total energy requirement during FY 2010-11 including Common Pool and Outside State Sales and T&D losses is determined as 42,355 MU as discussed in para 3.4. The energy available from PSPCL's own generating stations including its share from BBMB is 25,174 MU (16,537 MU thermal generation and 8,637 MU of hydel generation including share from BBMB) as approved in para 3.5. The balance energy requirement works out to 17,181 MU (net) which has to be met through purchases from Central Generating Stations and other sources.

The Commission, accordingly, approves the revised power purchase at 17,181 MU (net) for FY 2010-11.

3.7 Energy Balance

Details of energy requirement and energy availability projected by the Board in its ARR Petition for FY 2010-11, approved by the Commission in its Tariff Order for FY 2010-11, revised estimates supplied by PSPCL in the ARR Petition for FY 2011-12, and now approved by the Commission is given in Table 3-7.

Table 3-7: Energy Balance – FY 2010-11

(MU)

Sr. No.	Particulars	Projected by PSEB in ARR for FY 2010-11	Approved by the Commission in T.O. for FY 2010-11	Revised Estimates by PSPCL in ARR for FY 2011-12	Now approved by the Commission
1	2	3	4	5	6
A) Energy Requirement					
1	Metered Sales	22704	22433	21977	23211
2	Sales to Agriculture	11245	10305	10898	10327
3	Total Sales within the State	33949	32738	32875	33538
4	Loss percentage	18.00%	20.00%	18.00%	20.00%
5	T&D losses	7452	8185	7216	8385
6	Sales to Common pool consumers	302	302	303	303
7	Outside State Sales	125	53	254	129
8	Total Requirement	41828	41278	40648	42355

Sr. No.	Particulars	Projected by PSEB in ARR for FY 2010-11	Approved by the Commission in T.O. for FY 2010-11	Revised Estimates by PSPCL in ARR for FY 2011-12	Now approved by the Commission
1	2	3	4	5	6
B) Energy Available					
9	Own generation (Ex-bus)				
(a)	Thermal	16682	18236	16397	16537
(b)	Hydro	4342	4281	4277	4183
10	Share from BBMB (incl.share of common pool consumers)	4404	4404	4453	4454
11	Purchase net	16404	14357	15521	17181
12	Total Availability	41832	41278	40648	42355

3.8 Fuel Cost

3.8.1 The Board, in the ARR Petition for FY 2010-11, had projected fuel cost of Rs. 3,622.83 crore for gross generation of 18,345 MU. The Commission, in its Tariff Order for FY 2010-11, approved fuel cost of Rs. 3,370.40 crore for gross thermal generation of 20,039 MU. PSPCL, in its ARR Petition for FY 2011-12, has revised the estimates of fuel cost to Rs. 3,457.92 crore for gross thermal generation of 17,977 MU, based on calorific value and price of coal / oil for FY 2010-11 as given in Table 3-8 (A). The fuel cost worked out by PSPCL is based on the actual parameters for the first six months and the projected values for the remaining six months for FY 2010-11.

PSPCL while projecting the price of coal for the second half of FY 2010-11 has considered an escalation of 10% on the average coal price for the respective stations till September, 2010. This increase in price has been considered due to imposition of environment tax at Rs. 50 per MT by the Government of India, w.e.f. July 01, 2010 and a further entry tax of 4% levied by the Government of Punjab from August 18, 2010, Further, PSPCL while projecting the price of oil for second half of FY 2010-11, has considered an escalation of 10% on the actual average price of oil for the respective stations during the first half of FY 2010-11.

Table 3-8 (A): Calorific Value and Price of Coal and Oil, Transit loss of coal, Specific Oil consumption and Station Heat Rate as submitted by the PSPCL - FY 2010-11

Sr. No.	Station	Period	As submitted by PSPCL						
			Gross Calorific value of coal (kcal/kg)	Calorific Value of Oil (kcal/Ltr)	Price of Oil (Rs./KL)	Price of coal excluding transit loss (Rs./MT)	Transit Loss	Station Heat Rate (kcal/kWh)	Specific Oil Consumption (ml/kWh)
1	2	3	4	5	6	7	8	9	10
1	GNDTP	H1	3933	9400	34536	2724	0.41%	2942	4.05
	GNDTP	H2	3974		37990	2996	2.00%	2945	2.50
2	GGSSSTP	H1	3979	10000	25231	2752	1.60%	2636	0.52
	GGSSSTP	H2	4015		27754	3027	2.00%	2633	1.00
3	GHTP	H1	3935	9500	34215	2705	1.16%	2442	0.71
	GHTP	H2	3950		37637	2975	2.00%	2500	2.00

H1: April 2010 to September, 2010 & H2: October, 2010 to March, 2011

Fuel cost being a major item of expense, the Commission thought it prudent to get the same verified. The calorific value of oil and coal and the price of oil and coal accepted by the Commission are indicated in Table 3-8 (B). These values are based on data up to September 2010, as validated by the Commission.

Table 3-8 (B): Calorific Value and Price of Coal and Oil and Transit loss of coal as accepted by the Commission - FY 2010-11

Sr. No.	Station	As accepted by the Commission				
		Calorific value of coal (kcal/kg)	Calorific Value of Oil (kcal/Ltr)	Price of Oil (Rs./KL)	Price of coal excluding transit loss (Rs./MT)	Transit Loss
1	2	3	4	5	6	7
1	GNDTP	3933	9400	34527	2722	0.43%
2	GGSSSTP	3951	10000	25244	2752	1.60%
3	GHTP	3935	9500	34215	2703	1.16%

3.8.2 It has also come to the notice of the Commission that a substantial quantity of coal received from the captive coal mine of PSPCL has been used during FY 2010-11. The Commission has taken the coal quantity received from PANAM (PSPCL's captive coal mine) as submitted by PSPCL. The price of coal and corresponding calorific values given in the ARR Petition of PSPCL

[Table 3-8 (A)] and those validated by the Commission [Table 3-8 (B)] are weighted average values of coal, including PANAM coal.

3.8.3 The gross generation considered by the Commission in the estimation of fuel cost for FY 2010-11 is 18,158 MU. The fuel cost for different stations corresponding to generation now approved by the Commission has been worked out based on the parameters adopted by the Commission in its Tariff Order for FY 2010-11 and considering price and calorific value of coal and oil as validated and accepted by the Commission and detailed in Table 3-9 below.

3.8.4 No transit loss has been allowed for PANAM coal while arriving at fuel cost as prices according to the contract are on F.O.R. destination basis. In case of coal other than PANAM coal, normative transit loss of 2% has been allowed by the Commission.

Table 3-9: Fuel Cost – FY 2010-11

Sr. No.	Item	Derivation	Unit	Approved Fuel Cost for FY 2010-11				
				GNDTP (Unit I & II)	GNDTP (Unit III & IV)	GGSSSTP	GHTP	Total
1	2	3	4	5	6	7	8	9
1	Generation	A	MU	1395	420	9638	6705	18158
2	Heat Rate	B	kcal/kWh	2825	3000	2500	2500	
3	Specific oil consumption	C	ml/kWh	1.00	3.50	1.00	1.00	
4	Calorific value of oil	D	kcal/litre	9400	9400	10000	9500	
5	Calorific value of coal	E	kcal/kg	3933	3933	3951	3935	
6	Overall heat	$F = (A \times B)$	Gcal	3940875	1260000	24095000	16762500	
7	Heat from oil	$G = (A \times C \times D) / 1000$	Gcal	13113	13818	96380	63698	
8	Heat from coal	$H = (F-G)$	Gcal	3927762	1246182	23998620	16698802	
9	Oil consumption	$I = (G \times 1000) / D$	KL	1395	1470	9638	6705	
10	Transit loss of coal	J	(%)	2.00	2.00	2.00	2.00	
11	Total coal consumption excluding transit loss	$K = (H \times 1000) / E$	MT	998668	316853	6074062	4243660	
12	Quantity of PANAM coal	L	MT	786993	236944	3762882	3243445	

Sr. No.	Item	Derivation	Unit	Approved Fuel Cost for FY 2010-11				
				GNDTP (Unit I & II)	GNDTP (Unit III & IV)	GGSSSTP	GHTP	Total
1	2	3	4	5	6	7	8	9
13	Quantity of coal other than PANAM coal excluding Transit Loss	M=K-L	MT	211675	79909	2311180	1000215	
14	Quantity of coal other than PANAM coal including transit loss	N=M/(1-J/100)	MT	215995	81540	2358347	1020628	
15	Total quantity of coal required	O=L+N	MT	1002988	318484	6121229	4264073	
16	Cost of oil	P	Rs./KL	34527	34527	25244	34215	
17	Cost of coal	Q	Rs./MT	2722	2722	2752	2703	
18	Total cost of oil	$R=P \times I / 10^7$	Rs. crore	4.82	5.08	24.33	22.94	57.17
19	Cost of coal	$S=O \times Q/10^7$	Rs. crore	273.01	86.69	1684.56	1152.58	3196.84
20	Total Fuel cost	T=R+S	Rs. crore	277.83	91.77	1708.89	1175.52	3254.01
21	Per unit Cost	U=Tx10/A	Rs./unit	1.99	2.19	1.77	1.75	1.79

The Commission, therefore, approves the revised fuel cost at Rs. 3,254.01 crore for gross thermal generation of 18,158 MU.

3.9 Power Purchase Cost

3.9.1 The Commission, in its Tariff Order for FY 2010-11, approved the power purchase cost of Rs. 3,774.12 crore for purchase of 15,070 MU (gross). PSPCL, in its ARR Petition for FY 2011-12, has given revised estimates of Rs. 5,427.36 crore for purchase of 16,319 MU (gross) for FY 2010-11.

3.9.2 As discussed in para 3.6, the requirement of 17,181 MU (net) is to be met through purchases from Central Generating Stations and other sources. The transmission loss external to the PSTCL and PSPCL system has to be added to arrive at the quantum of gross energy to be so purchased. PSPCL has stated that the actual external losses in the first six months of the year are 4.53%. For the full year, PSPCL has assumed the external losses as 4.89% to compute the power purchase cost.

The actual external transmission losses incurred by the Board during FY 2009-10 were 4.83%. The Commission, therefore, decides to allow external losses @ 4.83% which were actually incurred by the Board in FY 2009-10. After adding 4.83% losses, the gross energy required to be purchased works out to 18,053 MU (17,181 MU + external losses of 872 MU).

The Commission decides to accept the power purchase cost for first half of FY 2010-11 as incurred by PSPCL for purchase of power from all sources, except power purchase through traders and UI. PSPCL has reported the power purchase of 2,475 MU from traders @ 553.68 paise per unit and 1098 MU of energy @ 479.23 paise per unit through UI during first half of FY 2010-11. The total cost incurred by PSPCL for this power purchase of 3,573 (2,475 +1,098) MU is Rs. 1,896.56 (1,370.36 + 526.20) crore. The Commission, in its Tariff Order for FY 2010-11, capped the power purchase price at 427.31 paise per unit for power purchased from traders (short term) and through UI, during FY 2010-11. Accordingly, the allowable short-term power purchase cost for first half of FY 2010-11 works out to Rs. 1,526.78 crore, and thus, power purchase cost of Rs. 369.78 crore for short term purchase during first half of FY 2010-11 has been disallowed. The Commission thus, approves the total power purchase cost for first half of FY 2010-11 at Rs. 3,698.40 crore, as against Rs. 4,068.18 crore claimed by PSPCL. Further, the Commission notes that PSPCL has purchased 11,778 MU in the first half of FY 2010-11. The Commission decides to determine the power purchase cost for the balance requirement of 6,275 MU (18,053-11,778) on pro-rata basis based on the cost approved by the Commission for the first half of FY 2010-11, Accordingly, the pro-rata amount for purchase of 6,275 MU works out to Rs. 1,970.41 (6,275/11,778x3,698.40) crore. Therefore, the total power purchase cost for FY 2010-11 works out to Rs. 5,668.81 (3,698.40+1,970.41) crore.

The Commission, therefore, approves the revised power purchase cost of Rs. 5,668.81 crore for the now determined power purchase of 18,053 MU gross.

3.9.3 The Commission had in its Tariff Order of FY 2010-11 mentioned that any change in fuel cost from the level approved by the Commission would be

passed on to the consumers as Fuel Cost Adjustment (FCA). The Board filed Petitions (30 of 2010 and 44 of 2010) for approval of FCA for the 1st and 2nd quarters of FY 2010-11. The Commission observes since the variable cost of fuel has been validated upto Sept, 2010 and the power purchase cost has been given on the basis of actual power purchase cost for the first six months of FY 2010-11, the FCA Petitions may be deemed to be disposed of accordingly.

3.10 Employee Cost

3.10.1 In the ARR Petition for FY 2010-11, the Board claimed employee cost of Rs. 3,566.57 crore inclusive of Rs. 525 crore as arrears for pay revision for FY 2010-11, against which the Commission approved a sum of Rs. 2,989.83 crore in the Tariff Order for FY 2010-11. The approved employee cost segregated for generation and distribution business of PSPCL in the Tariff Order for FY 2010-11 was Rs. 2,737.19 crore. PSPCL has now revised the employee cost to Rs. 3,487.71 crore, net of capitalization of Rs.120 crore for FY 2010-11, in the ARR Petition for FY 2011-12. During the presentation on March 11, 2011, PSPCL submitted that the employee cost was overstated by Rs. 1 crore on account of medical allowance. Also a revised claim of Rs. 104.29 crore and Rs. 189.93 crore on account of earned leave encashment and gratuity up to January 2011 has been filed. On this basis, the proportionate figures up to March 2011 of earned leave encashment and gratuity for FY 2010-11 work out to Rs. 125.15 crore and Rs. 227.92 crore. PSPCL also reported that, as per GoP notification the disbursement on account of arrears of pay would not be made in FY 2010-11 but in FY 2011-12. Accordingly, the claim of arrears of pay of Rs. 285 crore in FY 2010-11 is not being considered by the Commission. Thus, the revised claim of PSPCL on account of employee cost is Rs. 3,193.67 crore.

The revised estimates of PSPCL are shown in Table 3-10 below:

Table 3-10: Employee cost projected by PSPCL – FY 2010-11
(Rs. crore)

Sr. No	Particulars	Revised Estimates
1	Basic Pay	1220.00
2	Overtime	12.00
3	Dearness Allowance	516.00
4	Fixed medical Allowance	34.00

Sr. No	Particulars	Revised Estimates
5	Other Allowances	223.00
6	Bonus/ Generation Incentive	45.00
7	Medical Expenses Reimbursement	15.00
8	Workman's compensation	0
	Total (1 to 8)	2065.00
	Terminal Benefits	
9	Earned Leave Encashment	125.15
10	Gratuity	227.92
11	Commutation of Pension	0
12	Ex-gratia	0
	Total (9 to 12)	353.07
	Pension Payments	
13	Basic Pension	700.00
14	Dearness pension	0
15	Dearness Allowance	0
16	Any other expense	115.00
	Total(13 to 16)	815.00
	Total Expenses	3233.07
Less:	Amount capitalized	120.00
	Net amount	3133.07
Add:	Prior Period	5.60
Add:	BBMB share	75.00
	Total Employee's Cost	3193.67

3.10.2 The Commission in its earlier Tariff Orders has been observing that the employee cost of the Board is one of the highest in the country and has urged the Board to take effective steps to contain this cost. This issue has already been extensively dealt with in the Tariff Orders from FY 2002-03 to FY 2010-11. The Commission, in line with its earlier observations in this respect, is unable to accept the revised projections of employee cost reported by the Board's successor entity, i.e., PSPCL and considers it appropriate to determine such cost as per its Regulations.

3.10.3 The provisions of the PSERC Tariff Regulations 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.

PSPCL has submitted an estimation of terminal benefits and BBMB share amounting to Rs. 1,194.87 crore based on the actual expenses incurred in the

first half of the financial year. The Commission allows terminal benefits and BBMB share of Rs. 1,194.87 crore on actual basis as per Tariff Regulations.

3.10.4 As per Regulations, increase in other employee cost is to be limited to average WPI increase. Based on the WPI available for 5 months (April 2010 to August 2010), the Commission has calculated the average WPI increase of 7.55% which is adopted for purposes of calculation of the allowable employee cost for FY 2010-2011. The approved other employee cost of the Board for FY 2009-10 is Rs. 1,375.93 crore. For approving the other employee expenses of PSPCL for FY 2010-11, the Commission has bifurcated the approved other employee expenses of the erstwhile Board in proportion to the average number of employees of PSPCL and PSTCL. Thus the other employee cost of PSPCL for FY 2009-10 works out to Rs. 1,283.88 crore. Applying the WPI increase of 7.55%, the other employee cost of PSPCL works out to Rs. 1,380.81 crore. Thus the Commission approves other employee expenses of Rs. 1,380.81 for PSPCL for FY 2010-11.

3.10.5 Further, the Commission in the Tariff Order for FY 2010-11, deducted Rs. 100 crore from the allowable employee cost on account of the continuing failure of the Board to finalize and implement the study on rationalization of manpower. Unfortunately, the failure to rationalize manpower continues. Accordingly, the Commission imposes a cut of Rs. 100 crore for the Board/successor entities' inability to decide on this crucial issue. The Commission also notes that after the bifurcation of the Board into PSPCL and PSTCL, this deduction shall be made from the allowable employee cost of both the successor entities in proportion to number of employees of the successor entities. Accordingly, the Commission deducts Rs. 93.31 crore from the allowable employee cost of PSPCL.

Thus, the Commission allows the total employee cost of Rs. 2,482.37 (1,194.87+1,380.81–93.31) crore for FY 2010-11.

3.11 Repair & Maintenance (R&M) Expenses

3.11.1 In the ARR Petition for FY 2010-11, the Board projected R&M expenses at Rs. 429.24 crore against which, the Commission approved Rs. 373.24 crore. The approved R&M expenses segregated for generation and distribution

business of PSPCL in the Tariff Order for FY 2010-11 was Rs. 332.22 crore. In the ARR Petition for FY 2011-12, PSPCL has revised R&M expenses to Rs. 362.12 crore, net of capitalisation of Rs. 0.44 crore and inclusive of prior period expenses of Rs. 1.85 crore. Regulation 28 (4) (a) of the PSERC Tariff Regulations provides for adjusting base O&M expenses in proportion to increase in WPI to determine O&M expenses for subsequent years. Based on the WPI data available for 5 months (April 2010 to August 2010), the Commission has calculated the average WPI increase of 7.55% which is adopted for purposes of calculation of allowable R&M expenses. The base R&M expenses for FY 2010-11 are Rs. 406.50 (378.16 + 28.34) crore, where Rs. 378.16 crore are the R&M expenses approved for FY 2009-10 and Rs. 28.34 crore are the R&M expenses allowed on fixed assets added during the year. The base R&M expense of Rs. 406.50 crore is bifurcated between PSPCL and PSTCL in the ratio of Gross Fixed Assets (GFA) of PSPCL and PSTCL as on April 1, 2010. Thus the base R&M expenses for PSPCL for FY 2010-11 work out to Rs. 364.62 crore. After allowing WPI increase of 7.55% to the base figure of Rs. 364.62 crore, the R&M expenses for PSPCL for FY 2010-11 work out to Rs. 392.15 crore.

3.11.2 PSPCL, in the ARR Petition for FY 2011-12, has also claimed R&M expenses of Rs. 15.12 crore for six months on asset addition of Rs. 1,605.41 crore during the year. The Commission restricts the utility's claim of asset addition to Rs. 710.12 crore based on the ratio of the sum of opening Capital Work in Progress (CWIP) and capital expenditure estimated by PSPCL and approved by the Commission as discussed in para 3.14.2.

3.11.3 As per Regulation 28 (6) of the PSERC Tariff Regulations, R&M expenses are allowable for additional assets added during the year on a pro-rata basis from the date of commissioning of assets. Fixed assets approved to be added during the year are considered as having remained in service of PSPCL for six months on an average during the year. Based on the ratio of approved R&M expenses of Rs. 392.15 crore on total assets of Rs. 18,395.93 crore (which works out to 2.13%), additional R&M expenses of Rs. 7.56 crore are approved for FY 2010-11. As regards prior period expenses, the Commission is of the view that such expenses will be considered at the time of truing up when the audited accounts for the year would be available. Thus, the total

allowable R&M expenses work out to Rs. 399.71 (392.15+7.56) crore against PSPCL's claim of Rs. 360.28 crore excluding prior period expenses of Rs. 1.85 crore.

Accordingly, the Commission approves the R&M expense of Rs. 360.28 crore for FY 2010-11 as claimed by PSPCL.

3.12 Administrative & General (A&G) Expenses

3.12.1 In the ARR Petition for FY 2010-11, the Board projected A&G expenses at Rs. 79.95 crore, which were approved by the Commission in the Tariff Order for FY 2010-11. The approved A&G expenses segregated for generation and distribution business of PSPCL in the Tariff Order for FY 2010-11 were Rs. 65.27 crore. PSPCL, in the ARR Petition for FY 2011-12, has revised the A&G expenses for FY 2010-11 at Rs. 81.92 crore, net of capitalisation of Rs. 16.93 crore including prior period expenses of Rs. 1.23 crore. Regulation 28 (4) (a) of the PSERC Tariff Regulations provides for adjusting base O&M expenses in proportion to increase in WPI to determine O&M expenses for subsequent years. Based on the WPI data available for 5 months (April 2010 to August 2010), the Commission has calculated the average WPI increase of 7.55% which is adopted for purposes of calculation of allowable A&G expenses. The base A&G expense of Rs. 81.13 crore is bifurcated between PSPCL and PSTCL in the ratio of Gross Fixed Assets (GFA) of PSPCL and PSTCL as on April 1, 2010. Thus the base R&M expenses for PSPCL for FY 2010-11 work out to Rs. 72.77 crore. After allowing WPI increase of 7.55% to the base figure of Rs. 72.77 crore, the A&G expenses for PSPCL for FY 2010-11 work out to Rs. 78.27 crore.

3.12.2 The Commission observes that PSPCL, in its ARR Petition for FY 2011-12, has not claimed the A&G expenses for asset addition during the year. As per Regulation 28 (6) of the PSERC Tariff Regulations, A&G expenses are allowable for additional assets added during the year on a pro-rata basis from the date of commissioning of assets. PSPCL, in the ARR Petition for FY 2011-12, has claimed an asset addition of Rs. 1,605.41 crore during the year. The Commission restricts the utility's claim of asset addition to Rs. 710.12 crore based on the ratio of the sum of opening CWIP and capital expenditure estimated by PSPCL and approved by the Commission as

detailed in para 3.14.2. The Commission adopts the same principle for allowing A&G expenses for fixed assets added during the year as has been applied to R&M expenses. Based on the ratio of approved A&G expenses of Rs. 78.27 crore on opening GFA of Rs. 18,395.93 crore (which works out to 0.43 %), additional A&G expenses of Rs. 1.53 crore are approved for FY 2010-11 on account of approved asset additions during FY 2010-11. As regards prior period expenses the Commission is of the view that such expenses will be allowed at the time of truing up for the year, when the audited accounts for the year would be available. Thus, the total A&G expenses approved by the Commission for PSPCL work out to Rs. 79.80 (78.27+1.53) crore against PSPCL's claim of Rs. 80.69 crore (excluding prior period expenses of Rs. 1.23 crore).

Accordingly, the Commission approves the A&G expenses of Rs. 79.80 (78.27+1.53) crore for FY 2010-11.

3.13 Depreciation Charges

3.13.1 The Board projected depreciation charges at Rs. 952.44 crore in the ARR Petition for FY 2010-11, against which the Commission approved depreciation charges of Rs. 863.68 crore in the Tariff Order for FY 2010-11. The approved depreciation segregated for generation and distribution business of PSPCL in the Tariff Order for FY 2010-11 was Rs. 740.61 crore. Now PSPCL has revised the estimate of depreciation charges to Rs. 802.27 crore for FY 2010-11 for assets valued at Rs. 18,329.39 crore as on April 01, 2010. The Commission observes that the total assets of the Board as on April 1, 2010 are Rs. 20,508.85 crore, after considering Audit Notes for the FY 2009-10. After bifurcation of the Board into successor entities, the transmission assets of Rs. 2,112.92 crore have been transferred to PSTCL and the remaining assets worth Rs. 18,395.93 crore are with PSPCL on provisional basis. The Commission thus, approves the depreciation for opening assets of PSPCL as on April 01, 2010. The Commission has worked out the deprecation rate based on the approach followed by the Commission in the Tariff Order for FY 2010-11. For determining the deprecation rate, the Commission has determined the function-wise depreciation for FY 2009-10

from the audited accounts for FY 2009-10 and has derived the effective depreciation rate for FY 2009-10.

3.13.2 The Commission has applied the same depreciation rate for FY 2010-11, for determining the depreciation charges for FY 2010-11. The depreciation rate and the depreciation charges are thus worked out by the Commission as shown in Table 3-11 below:

Table 3-11: Approved Depreciation for PSPCL- FY 2010-11

Sr.No.	Item	(Rs. crore)			% Rate
		Assets as on April 1, 2010	Assets belonging to PSPCL	Amount of Depreciation for FY 2010-11	
1	2	3	4	5	6
1	Thermal	5688.79	5688.79	294.37	5.17%
2	Hydro	5985.27	5985.27	136.45	2.28%
3	Internal combustion	2.68	2.68	0.00	0.00%
4	Transmission	2112.92	-	0.00	0.00%
5	Distribution	6524.09	6524.09	368.89	5.65%
6	Others	195.10	195.10	1.74	0.89%
	Total	20508.85	18395.93	801.45	

The Commission, therefore, approves depreciation charges of Rs. 801.45 crore for FY 2010-11.

The Commission observes that PSPCL is not maintaining category wise details of fixed assets, as required under The Companies Act, 1956. The Commission directs PSPCL to maintain category-wise details of assets as per provisions of The Companies Act, 1956.

3.14 Interest and Finance Charges

3.14.1 The Board claimed Interest and Finance charges of Rs. 1,923.01 crore for FY 2010-11 in the ARR Petition for FY 2010-11, against which the Commission approved an amount of Rs. 972.57 crore in the Tariff Order for FY 2010-11. The approved interest and finance charges segregated for generation and distribution business of PSPCL in the Tariff Order for FY 2010-11 were Rs. 862.18 crore. PSPCL, in the ARR Petition for FY 2011-12, has revised the net Interest and Finance charges for FY 2010-11

to Rs. 1,803.47 crore, inclusive of Finance charges of Rs. 20.00 crore, as detailed in Table 3-12:

Table 3-12: Interest & Finance Charges claimed by PSPCL – FY 2010-11
(Rs. crore)

Sr. No.	Description	Interest as depicted in ARR Petition
1	2	3
1	Interest on Institutional Loans	726.86
2	Interest on GoP Loans	0.00
3	Interest on GPF	160.00
4	Lease rentals	0.00
5	Interest to Consumers	176.64
6	Sub-Total	1063.50
7	Interest on WCL	793.01
8	Discount to Consumers for Advance Payment	0.13
9	Finance Charges for Loans	20.00
10	Total (6+7+8+9)	1876.64
11	Less; Capitalisation	73.18
12	Net Interest and Finance Charges	1803.47

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

3.14.2 Investment Plan

The Commission, in its Tariff Order for FY 2010-11, approved an Investment Plan of Rs. 2,500 crore for the composite Board. In the ARR Petition for FY 2011-12, PSPCL has submitted a revised investment plan of Rs. 2,595.07 crore for FY 2010-11. This includes an amount of Rs. 300 crore under the head 'Transmission' and Rs.1,620 crore under the head 'Distribution' which includes Rs. 532 crore for HVDS projects for reduction of T&D loss, Rs. 98 crore for RAPDRP scheme and Rs. 60 crore for rural electrification (PMGY) apart from Rs. 665 crore on account of normal development works. As per the additional information sought from PSPCL, the Commission observes that the total capital expenditure incurred up to January 2011 is only Rs. 569.76 crore, and it appears unlikely that PSPCL would be able to effect the proposed investment of Rs. 2,595.07 crore during the remaining two months of FY 2010-11. On the basis of capital expenditure actually incurred upto the end of January 2011, the proportionate capital expenditure for the months of

February and March, 2011 would be Rs. 113.95 crore. Accordingly, the likely capital expenditure for FY 2010-11 would be Rs. 683.71 (569.76 + 113.95) crore. On this basis, the Commission approves an investment plan of Rs. 700 crore for FY 2010-11. However, increase/decrease in actual capital investment, if any, will be considered by the Commission during true up.

In addition, the PSPCL has received consumer contribution of Rs. 95.74 crore upto January 31, 2011 and after increasing it proportionately, estimated receipts on this account during the year work out to Rs. 114.89 crore. Accordingly, actual loan requirement for this level of investment works out to Rs.585.11 (700-114.89) crore.

In the ARR Petition for FY 2010-11, interest on loans availed by the PSPCL is depicted as Rs.726.86 crore. However, interest on allowable loans (other than WCL & GoP loans) is Rs. 623.13 crore as given in Table 3-13.

Table 3-13: Interest on Loans (Other than WCL and GoP Loans)
(Rs. crore)

Sr. No.	Particulars	Loans as on April 1, 2010	Receipt of Loan during FY 2010-11	Repayment of Loan during FY 2010-11	Loans as on March 31, 2011	Amount of Interest
1	2	3	4	5	6	7
1	As per data furnished in ARR Petition (other than WCL and GoP Loans)	6071.04*	2595.07	652.89	8013.22	726.86
2	Approved by the Commission (other than WCL and GoP Loans)	6071.04	585.11	652.89	6003.26	623.13

*Excluding Loans of Rs. 870.20 crore transferred to PSTCL

3.14.3 Interest on GoP Loans

In the Tariff Order for FY 2010-11, the Commission approved interest expenses of Rs. 68.65 crore on GoP loan of Rs 520.09 crore payable by the Board/PSPCL. However, this amount was adjusted against interest disallowed on account of diversion of capital funds for revenue purposes.

In the audited accounts for FY 2009-10, outstanding GoP loans are shown at Rs. 520.07 crore but as per GoP's letter dated April 15, 2010 the loan of Rs. 520.07 crore has been adjusted by the GoP against the unpaid subsidy.

Interest payable on loan of Rs. 520.07 crore works out to Rs. 2.93 crore for 15 days by applying an average rate of 13.50% per annum. As discussed in Para 3.14.10, the interest burden of Rs.125.93 crore is transferred to GoP on account of diversion of capital funds for revenue purposes. Thus, net amount receivable by PSPCL from GoP under the head of Interest charges works out to Rs.123 (125.93 -2.93) crore.

3.14.4 Interest on loans taken to replace re-called GoP Loans

The interest on loans of Rs. 3,022.10 (1,362.00 +1,140.03 +520.07) crore raised to replace re-called GoP loans is allowed at an average rate of 9.19 % per annum for short term loans. Thus, interest of Rs.275.74 crore is approved on this account.

3.14.5 Interest on G.P. Fund

PSPCL has claimed interest of Rs.160 crore on GP Fund accumulations. The interest of Rs.160 crore on G.P. Fund, being a statutory payment, is allowed as claimed by the PSPCL.

3.14.6 Finance Charges

In its Tariff Order for FY 2010-11, the Commission allowed finance charges of Rs. 6.63 crore applying a rate of 0.31% on the total borrowing requirement of Rs.2,137.35 crore. As per revised estimates, PSPCL has claimed Finance charges of Rs.20 crore for fresh borrowings of Rs. 2,595.07 crore. The rate of finance charges as per revised estimates of PSPCL works out to 0.77% of the proposed borrowings. The increase in the rate of finance charges has been attributed to levy of surety charges by the Government for the loans availed by PSPCL. The Commission has, however, approved net loan requirement of Rs. 585.11 crore in para 3.14.2 above. Applying a rate of 0.77% to the approved borrowings of Rs.585.11 crore, allowable finance charges work out to Rs.4.51 crore for FY 2010-11.

3.14.7 Interest on Consumer Security Deposits

In the Tariff Order of FY 2010-11, interest on consumer deposits was not allowed for FY 2010-11 as the same was payable after 31.03.11. In the ARR Petition for FY 2011-12, PSPCL has claimed Rs.176.64 crore towards interest on consumer security deposits for FY 2010-11. However, in its presentation dated March 11, 2011, PSPCL has revised its claim for interest on consumer

security deposits to Rs. 189 crore. As discussed in para 2.15.11 the Commission has allowed an interest of Rs. 82.06 crore for FY 2009-10 as per audited accounts of the Board. Since the amount of interest on security deposit held by PSPCL in FY 2010-11 is not available yet, allowable interest on this account is restricted to Rs.82.06 crore as allowed for FY 2009-10 by the Commission. The actual expenditure on this account shall be considered during true up.

3.14.8 Capitalisation of Interest and Finance Charges

The Commission, as per past practice, has capitalised the interest expenses, excluding interest on working capital, in the ratio of net works in progress to total capital expenditure. Based on this principle and the expenditure as reflected in the revised estimates, the Commission approves capitalisation of interest and finance charges of Rs.45.76 crore for FY 2010-11.

3.14.9 Working Capital

In the Tariff Order for FY 2010-11, the Commission approved working capital of Rs.1,679.56 crore with interest cost of Rs. 205.75 crore.

The working capital requirement as per Regulations works out to Rs.1,696.64 crore and interest thereon comes to Rs. 199.36 crore by applying the State Bank Advance Rate of 11.75% as on April 01, 2010. The details of working capital requirement as per Regulation 30 and allowable interest are depicted in Table 3-14.

Table 3-14: Interest on Working Capital Requirement - FY 2010-11
(Rs. crore)

Sr. No	Particulars	Approved by the Commission
1	Two months Fuel Cost	542.34
2	One month Power Purchase Cost	472.40
3	One month Employee Cost	206.86
4	One month A&G Cost	6.65
5	One month R&M Cost	30.02
6	Maintenance Spare @ 15% of O&M expense	438.37
7	Total Working Capital Required	1696.64
8	State Bank Advance Rate as on April 01, 2010	11.75%
9	Interest on Working Capital Loan	199.36

Accordingly, the Commission approves interest of Rs. 199.36 crore on working capital requirement for FY 2010-11.

3.14.10 Diversion of Capital Funds

The Commission, in paras 2.15.7 and 2.15.8 of this Order, has re-determined the diversion of capital funds for revenue purposes at Rs. 2,458.56 crore based on the Boards' Audited Accounts for FY 2009-10. Of this amount, Rs.1,821.21 crore is the net diversion carrying interest bearing liability. Diversion of capital funds for FY 2010-11 is estimated on the same basis and will be firmed up on the availability of audited accounts for the year. Interest @ 13.20% (being average rate of interest on GoP loans in FY 2009-10) on diverted funds of Rs.1,821.21 crore comes to Rs. 240.40 crore for FY 2010-11. This interest of Rs. 240.40 crore on account of diversion of capital funds is being disallowed from the interest cost for FY 2010-11. The share of PSPCL out of Rs. 240.40 crore works out to Rs. 215.63 crore based on the ratio of fixed assets of PSPCL and PSTCL as on April 01, 2010. The Commission retains its decision to disallow interest of Rs. 89.70 crore of PSPCL based on the ratio of a similar disallowance in FY 2009-10. Balance disallowance of Rs. 125.93 crore is to the account of GoP.

Accordingly, after adjustment of this disallowed interest against the interest of Rs. 2.93 crore due on GoP loans worked out in para 3.14.3, net interest receivable by PSPCL from the GoP works out to Rs. 123.00 crore. This amount is carried forward to para 3.15.

In the view of above, Interest and Finance charges for FY 2010-11 are allowed as per Table 3-15.

Table 3-15: Interest and Finance Charges – FY 2010-11**(Rs. crore)**

Sr. No.	Particulars	Loans as on April 01, 2010	Receipt of Loans	Repayment of Loans	Loans as on March 31, 2011	Interest Approved by the Commission
1	2	3	4	5	6	7
1	Approved by the Commission (Other than WCL and GoP Loans)	6071.04	585.11	652.89	6003.26	623.13
2	GoP Loans	520.07	-	520.07	-	2.93
3	Interest on Loans taken to replace GoP loans of Rs. 3022.10 crore					275.74
4	Interest on GPF					160.00
5	Lease Rentals					0.00
6	Total(1+2+3+4+5)	6591.11	585.11	1172.96	6003.26	1061.80
7	Add: Finance Charges					4.51
8	Add: Interest on Consumer Security Deposits					82.06
9	Gross Interest and Finance Charges (6+7+8)					1148.37
10	Less Capitalisation					45.76
11	Net Interest and Finance Charges (9-10)					1102.61
12	Add: Interest on Working Capital					199.36
13	Total Interest					1301.97
14	Less: Disallowance on a/c of diversion: a) Board- Rs. 89.70 Crore b) GoP - Rs. 125.93 Crore					215.63
15	Balance Interest and Finance Charges					1086.34

Accordingly, the Commission approves net Interest and Finance charges of Rs. 1,086.34 crore for FY 2010-11.

3.15 Subsidy

3.15.1 In para 5.4.1 of the Tariff Order for FY 2010-11, the requirement of subsidy for FY 2010-11 was determined at Rs. 3,023.54 crore for AP consumers, SC Domestic and Non-SC BPL DS consumers. After adjusting subsidy paid in excess of Rs. 230 crore up to FY 2009-10, the total subsidy payable by GoP to PSPCL for FY 2010-11 was approved at Rs. 2,793.54 (3,023.54 - 230) crore.

3.15.2 Based on the true-up for FY 2009-10, subsidy(including interest on delayed payment of subsidy) amounting to Rs. 3,132.15 crore is determined as payable by GoP to PSPCL for FY 2009-10 against which Rs. 3,144.25 crore has already been paid, resulting in excess payment of Rs. 12.10 crore upto FY 2009-10. The amount of subsidy payable by GoP to PSPCL for FY 2010-11 is revised as under:

- **AP Consumption:** PSPCL, in its ARR petition for FY 2011-12, has reported AP consumption for FY 2010-11 at 10,898 MU on which subsidy of Rs.2,775 crore (after adjusting Rs. 712 crore claimed as receivable from the AP consumers) is claimed by PSPCL for FY 2010-11. The Commission has, however, revised AP consumption for FY 2010-11 to 10,327 MU as discussed in para 3.2.3 of this Order and subsidy on account of AP consumption of 10,327 MU @ 320 paise per kWh works out to Rs. 3,313.64 crore (Rs. 3,304.64 crore towards subsidy on account of .energy charges and Rs. 9.00 crore towards subsidy on account of meter rentals and service charges etc.) As discussed in para 2.17, GoP had earlier decided to charge an amount of Rs. 50 per BHP per month from AP consumers with effect from January 22, 2010. Thereafter, in its decision dated November 03, 2010 GoP discontinued charging the same from AP consumers. PSPCL in ARR Petition for FY 2011-12, has estimated revenue receivable on this account amounting to Rs. 712 crore. However, PSPCL in its subsequent submissions stated that the estimated revenue from such charges for the period January 22, 2010 to November 02, 2010 is Rs. 452.08 crore. Out of this, an amount of Rs. 154.65 crore has reportedly been recovered by PSPCL. Since Rs. 452.08 crore is the revenue which is accruing to PSPCL because of levy of such charges, the net subsidy payable by GoP on account of AP consumption works out to Rs. 2,861.56(3,313.64-452.08) crore.
- **Scheduled Castes (SC) Domestic Supply (DS) consumers:** PSPCL, in its letter dated March 10, 2011 has claimed Rs. 265.00 crore towards subsidy on account of sale to scheduled castes domestic supply consumers. It also has claimed subsidy of Rs. 15.03 crore on account of meter rentals and service charges etc. Thus the total amount of subsidy

receivable from GoP for sale to scheduled castes domestic supply consumers works out to Rs. 280.03 crore.

- **Non-SC Below Poverty Line (BPL) DS consumers:** PSPCL, in its letter dated March 10, 2011 has also claimed Rs. 8.92 crore towards subsidy on account of sale to Non-SC Below Poverty Line(BPL) domestic supply consumers. It also has claimed subsidy of Rs. 0.20 crore on account of meter rentals and service charges etc. Thus the total amount of subsidy receivable from GoP for sale to Non-SC Below Poverty Line (BPL) domestic supply consumers works out to Rs. 9.12 crore.

3.15.3 Refund on account of rollback of tariff: Keeping in view the Cabinet decision dated January 22, 2010, PSPCL, in its ARR Petition for FY 2011-12, has claimed an amount of Rs. 333.85 crore, on account of refund due to rollback of tariff increase ordered by the Commission in the Tariff Order of FY 2009-10. The decision regarding refund on account of rollback of the tariff increase for the period from April 01, 2009 to September 08, 2009, was conveyed to the Commission in GoP letter dated March 26, 2010. This amount was to be refunded to consumers in six equated monthly installments starting from April, 2010.

Accordingly, the subsidy payable for FY 2010-11 has been determined at Rs. 3,484.56 (2,861.56 + 280.03 + 9.12 + 333.85) crore.

3.15.4 Interest on Delayed Payment of Subsidy

The GoP has paid subsidy due to PSPCL in FY 2010-11 initially by adjusting a loan amount of Rs. 520.07 crore and ED of Rs. 269.78 crore and subsequently in staggered installments. Although the Commission has determined an excess payment of Subsidy to PSPCL of Rs. 12.10 crore while true-up for FY 2009-10, the Commission observes that there has been delay in payment of subsidy to PSPCL in FY 2010-11. In accordance with past practice, the Commission, with a view to compensating PSPCL on this account, levies interest on the delayed payment of subsidy @ 9.19% (effective interest on short term loans as per the ARR of PSPCL) which works out to Rs 15.60 crore for FY 2010-11. This amount will, however, need to be recalculated at the time of true-up of FY 2010-11, in the next Tariff Order.

Accordingly, the subsidy payable for FY 2010-11, inclusive of interest on delayed payment of subsidy, determined as payable by the GoP to PSPCL is Rs. 3,500.16 (3,484.56 + 15.60) crore.

The total amount of subsidy as received by PSPCL from GoP in FY 2010-11 is Rs. 3,375.55 crore. Thus the balance subsidy receivable from GoP for FY 2010-11 works out to Rs. 124.61 (3,500.16 – 3,375.55) crore. This is carried forward to para 6.4.2.

Besides this, GoP is liable to pay an amount of Rs. 206.01 crore (as discussed in para 2.18.2) on account of non-refund of excess interest paid by PSPCL to GoP. Also as per para 3.14.10, the amount payable by GoP to PSPCL on account of share of disallowance for diversion of capital funds for revenue purposes has been worked out to Rs. 123 crore. Thus, the total amount payable to PSPCL by GoP works out to Rs. 329.01 (206.01+123) crore. This is carried forward to para 6.4.

3.16 Return on Equity (ROE)

3.16.1 In the ARR Petition for FY 2010-11, the Board claimed ROE @ 15.5 % (pre-tax) to be grossed up to 23.48% as provided in the CERC Tariff Regulations. The PSERC Tariff Regulations stipulate that CERC Regulations shall be followed 'as far as possible'. In the Tariff Order for FY 2010-11, the Commission approved the ROE @ 14 % on account of inability of the Board to show the requisite improvements in critical performance parameters such as T&D losses and employee cost. The approved ROE segregated for generation and distribution business of PSPCL in the Tariff Order for FY 2010-11 was Rs. 366.47 crore.

Now, PSPCL in the ARR Petition for FY 2011-12, has claimed the return on equity of Rs. 598.86 @ 15.5% (pre-tax) to be grossed up to 22.88% as provided in CERC Tariff Regulations. In its letter dated February 2, 2011, PSPCL submitted that it has not considered the education cess of 3% while computing the applicable tax rate and thus, revised the return on equity to Rs. 607.54 crore @ 15.5% (pre-tax) to be grossed up to 23.21%. The Commission is of the view that PSPCL has not shown requisite improvement

in the critical parameters like employee cost. Thus, the Commission retains the ROE rate @ 14%. Accordingly, the Commission works out the ROE at Rs. 366.47 crore on an equity of Rs. 2,617.61 crore.

Accordingly, the Commission approves Return on Equity of Rs. 366.47 crore for FY 2010-11.

3.17 Transmission Charges Payable to PSTCL

The Commission in its Order dated May 9, 2011, passed on the ARR of PSTCL for FY 2010-11 has determined Rs. 401.97 crore as the transmission charges payable to PSTCL by PSPCL. Accordingly, this is being included in the ARR of PSPCL for FY 2010-11.

3.18 Charges Payable to GoP on account of Power from Ranjit Sagar Dam (RSD)

PSPCL has claimed Rs. 10.99 crore on account of charges payable to GoP for its share of power from Ranjit Sagar Dam (RSD). In support of its claim, PSPCL has submitted the copy of Minutes of the 46th Meeting of the Standing Committee of the Ranjit Sagar Dam Construction Board (RSDCB) held on February 19, 2009 and the resolution of PSPCL dated August 10, 2010, whereby PSPCL would pay 3% of the revenue received by it from sale of power produced from RSD, as maintenance charges as well as charges for remaining works of RSD, which would be deposited in the Punjab Treasury. The Commission allows this amount to be included in the ARR of PSPCL for FY 2010-11.

3.19 Non-Tariff Income

In the Tariff Order for FY 2010-11, the Commission approved non-tariff income of Rs. 448.66 crore. PSPCL, in the ARR Petition for FY 2011-12, revised the estimate of non-tariff income to Rs. 492.07 crore for FY 2010-11. In the additional information supplied by PSPCL vide letter dated February 2, 2011, it has claimed non-tariff income of Rs. 510.12 crore for FY 2010-11 (inclusive of wheeling charges of Rs. 2.56 crore.) Further, PSPCL vide its letter dated March 10, 2011 has revised wheeling charges from Rs. 2.56 crore to 34.16 crore. Thus, the non-tariff income works out to

Rs. 541.72 crore. In addition PSPCL has received meter rentals and service charges amounting to Rs. 24.23 crore in respect of AP consumers, Scheduled caste Domestic Supply consumers and Non-Scheduled Caste BPL consumers during the year. Thus, total non-tariff income works out to Rs. 565.95 crore.

The Commission, therefore, approves Rs. 565.95 crore as the Non-Tariff Income of PSPCL for FY 2010-11.

3.20 Revenue from Existing Tariff

PSPCL, in its ARR Petition for FY 2011-12, has revised the revenue from existing tariff to Rs. 9,616 crore for FY 2010-11 against Rs. 12,740.82 crore approved by the Commission in the Tariff Order for FY 2010-11. In the letter dated February 02, 2011, PSPCL has revised the revenue from outside State sale to Rs. 44.2 crore against Rs. 39 crore reported in the ARR Petition. Further, PSPCL has revised the estimate of revenue from existing tariff based on energy sales of 33,432 MU, whereas, the Commission has determined such sales as 33,970 MU. Also in its letter dated March 25, 2011, PSPCL has stated that the amount of PLEC and MMC received up to January 2011 are Rs. 120.66 crore and Rs. 245.35 crore respectively. Based on the above figures, the PLEC and MMC charges for FY 2010-11 work out to Rs. 439.21 crore. Taking, these factors into account, the Commission now revises revenue from existing tariff to Rs. 13,992.74 crore for FY 2010-11 as given in Table 3-16 below:

Table 3-16: Revenue at Existing Tariff - FY 2010-11

Sr. No.	Category of consumers	PSPCL Submission		Now approved by the Commission		
		Energy Sale (MU)	Revenue (Rs. crore)	Energy Sale (MU)	Tariff Rate (Paise/unit)	Revenue (Rs. crore)
1	2	3	4	5	6	7
1	Domestic					
a)	0-100 Units	4556	1171	4557	311	1417.23
b)	101-300 Units	2381	929	2381	452	1076.21
c)	Above 300 Units	1224	504	1224	478	585.07
	Sub-Total	8161	2604	8162		3078.51
2	Non-Residential Supply	2401	1204	2401	519	1246.12
3	Public Lighting	134	74	134	510	68.34
4	Industrial Consumers					
a)	Small Power	814	327	813	414	336.58
b)	Medium Supply	1709	775	1709	458	782.72
c)	Large Supply	8072	3322	9307	458	4262.61
	Sub-Total	10596	4425	11829		5381.91
5	Bulk Supply & Grid Supply					
a)	HT			485	461	223.59
b)	LT			38	489	18.58
	Sub-Total	523	239	523		242.17
6	Railway Traction	161	78	162	541	87.64
7	Common Pool	303	100	303		100.00
8	Outside State	254	39	129		44.20
9	Total (1 to 8)	22534	8763	23643		10248.89
10	AP	10898	712	10327	320	3304.64
11	Add: PLEC, MMC, etc.		140			439.21
12	GRAND TOTAL	33432	9616	33970		13992.74

3.21 Revenue Requirement

A summary of the review of FY 2010-11 as discussed in the preceding paragraphs is given in Table 3-17.

Table 3-17: Revenue Requirement - FY 2010-11**(Rs. crore)**

Sr. No.	Item of Expense	Revised Estimates by PSPCL	Now Approved by the Commission
1	2	3	4
1	Cost of fuel	3457.92	3254.01
2	Cost of power purchase	5427.36	5668.81
3	Employee cost	3487.71	2482.37
4	R&M expenses	362.12	360.28
5	Admin & General Expenses	81.92	79.80
6	Depreciation	802.27	801.45
7	Interest charges	1803.47	1086.34
8	Return on Equity	598.86	366.47
9	Transmission charges payable to PSTCL	647.30	401.97
10	Charges payable to GoP on Power from RSD	10.99	10.99
11	Total Revenue Requirement	16679.93	14512.49
12	Less: Non Tariff Income	492.07	565.95
13	Net Revenue Requirement	16187.86	13946.54
14	Less Revenue from Existing Tariff	12742.19	13992.74
15	Gap : Surplus (+)/ Deficit (-) for FY 2010-11	(-) 3445.67	(+) 46.20
16	Consolidated Gap: Surplus (+)/ Deficit (-) upto FY 2009-10	(-) 1978.05	(-) 2162.89
17	Net Gap: Surplus (+)/ Deficit (-)	(-) 5423.72	(-) 2116.69

Review of FY 2010-11 indicates that there is now a surplus of Rs. 46.20 crore for FY 2010-11. After taking into account the cumulative deficit of Rs. 2,162.89 crore up to FY 2009-10, the total deficit works out to Rs. 2,116.69 crore at the end of FY 2010-11. This deficit is being carried forward to the next financial year.

Chapter 4

Annual Revenue Requirement for FY 2011-12

4.1 Energy Demand (Sales)

4.1.1 Metered Energy Sales:

PSPCL has projected metered energy sales (except for Large Supply) for FY 2011-12 based on category-wise 3-year Compounded Annual Growth Rate (CAGR) from FY 2006-07 to FY 2009-10. The 3-year CAGR has been worked out from audited metered sales for the period from FY 2006-07 to FY 2009-10, which has then been applied to the revised estimates of metered sales of all respective categories, except Large Supply for FY 2010-11 (though it has been mistakenly mentioned as FY 2009-10 in the ARR Petition), to arrive at energy sales projections for FY 2011-12. For Large Supply category, PSPCL has applied a growth rate of 6.5% over revised estimate for FY 2010-11. Details of PSPCL's projections are given in Table 4-1.

Table 4-1: Energy Sales to Metered Categories as per ARR Petition – FY 2011-12 (MU)

Category	Metered Energy Sales	
	FY 2010-11 (RE)	FY 2011-12 (Projections)
1	2	3
Domestic	8161	8836
Non-Residential	2401	2618
Small Power	814	835
Medium Supply	1709	1752
Large Supply	8072	8600
Public Lighting	134	136
Bulk Supply	523	537
Railway Traction	161	181
Total Sales (within the State)	21977*	23494**

**Wrongly depicted by PSPCL in the ARR Petition against actual sum total of 21,975 MU*

*** Wrongly depicted by PSPCL in the ARR Petition against actual sum total of 23,495 MU*

The Commission has estimated the category-wise sales within the State for FY 2011-12 for all categories, including Large supply, by applying the 3-years CAGR (FY 2006-07 to FY 2009-10), on sales for FY 2010-11 as approved in Chapter-3 of this Order. Approved sales for FY 2006-07 and FY 2009-10, 3 year CAGR for FY 2006-07 to FY 2009-10 as calculated by the Commission, and sales now approved for FY 2010-11 and FY 2011-12 for different metered categories within the State are given in Table 4-2.

Table 4-2: 3 Year CAGR & Estimated Metered Sales within the State - FY 2011-12

(MU)						
Sr. No.	Category	FY 2006-07 (Approved after Truing-up)	FY 2009-10 (Actuals)	3 year CAGR (FY 2006-07 to FY2009-10)	Sales now Approved for FY 2010-11	Approved sales by the Commission for FY 2011-12
1	2	3	4	5	6	7
1	Domestic	5726	7310	8.48%	8162	8854
2	Non- Residential	1646	2147	9.26%	2401	2623
3	Small Power	716	775	2.67%	813	835
4	Medium Supply	1494	1619	2.71%	1709	1755
5	Large Supply	7998	8795	3.22%	9307	9607
6	Public Lighting	129	137	2.03%	134	137
7	Bulk Supply	457	499	2.97%	523	539
8	Railway Traction	106	148	11.77%	162	181
9	Total Metered sales	18272	21430		23211	24531

4.1.2 Sales to Common Pool consumers and Outside State Sales

PSPCL has projected sales to Common Pool and Outside State Sales for FY 2011-12 as below:

(MU)		
Category	FY 2010-11 (RE)	FY 2011-12 (Projections)
Sales to Common Pool Consumers	303	302
Sales Outside State	254	116

Sales to Common Pool consumers for FY 2011-12 are based on actual figures of such sales for past three years.

The Outside State sales of 116 MU projected by PSPCL in the ARR Petition for FY 2011-12 have been subsequently revised to 115 MU by PSPCL (vide its letter dated February 02, 2011). The Commission notes that these sales include Himachal Pradesh's free share in RSD @ 4.6% of gross generation

from RSD (62 MU) and HP royalty in Shanan (53 MU). The same is required to be excluded from the Outside State sales, in view of the practice followed by the Commission in the previous Tariff Orders. Therefore, the Commission considers the Outside State sales as Nil. The Commission accepts the Common Pool sales of 302 MU as projected by PSPCL.

The Commission approves Outside State sale at Nil for FY 2011-12 and the sale of 302 MU to Common Pool Consumers.

The total metered sales for FY 2011-12 estimated by PSPCL and approved by the Commission are given in Table 4.3.

Table 4.3: Metered Sales – FY 2011-12

(MU)			
Sr. No.	Category	Projected by PSPCL for FY 2011-12	Approved by the Commission
1	2	3	4
1	Domestic	8836	8854
2	Non- Residential	2618	2623
3	Small Power	835	835
4	Medium Supply	1752	1755
5	Large Supply	8600	9607
6	Public Lighting	136	137
7	Bulk Supply	537	539
8	Railway Traction	181	181
9	Total Metered sales	23494	24531
10	Common Pool	302	302
11	Outside State Sales	116	0
12	Total sales	23912	24833

The Commission, thus, approves metered sales at 24,833 MU against 23,912 MU projected by PSPCL.

4.1.3 AP Consumption

PSPCL, in the ARR Petition for FY 2011-12, has submitted that growth in AP consumption during FY 2010-11 is low due to abundant rainfall, therefore, for projection of AP consumption for FY 2011-12, PSPCL has projected AP consumption at 12,253 MU by applying CAGR of last three years (8%) twice over the actual AP consumption of 10,505 MU for FY 2009-10. PSPCL has

further requested the Commission to consider the actual trend in growth of AP consumption and consider the similar approach for estimation of AP sales as considered for metered category sales.

The Commission, during the Review for FY 2010-11, has approved AP consumption of 10,327 MU by reducing PSPCL's submission for first half of FY 2010-11, i.e., 6,605 MU by 4.03 % based on analysis done by the Commission of the consumption reported by PSPCL during April 2010 to September 2010, and for the second half of FY 2010-11, the Commission allowed an increase of 5% over the AP consumption approved by the Commission for the second half of FY 2009-10. The Commission decides to estimate AP consumption for FY 2011-12 by applying 5% increase over sales of 10,327 MU approved by the Commission for FY 2010-11. Thus, AP consumption for FY 2011-12 works out to 10,843 MU.

Thus, the Commission approves the AP consumption at 10,843 MU for FY 2011-12.

4.1.4 Total Energy Demand (Sales)

The total metered sales, AP consumption, Common Pool and Outside State sales projected by PSPCL and as approved by the Commission for FY 2011-12 are given in Table 4-4.

Table 4-4: Total Energy Sales - FY 2011-12

(MU)			
Sr. No.	Category	Projected by PSPCL for FY 2011-12	Approved by the Commission
1	2	3	4
1	Total Metered sales	23494	24531
2	AP Consumption	12253	10843
3	Total Sales within the State (1+2)	35747	35374
4	Common Pool	302	302
5	Outside State Sales	116	0
6	Total sales	36165	35676

The Commission, thus, approves total energy sales to different categories of consumers at 35,676 MU including Common Pool and Outside State sales.

4.2 Transmission and Distribution Losses (T&D Losses)

PSPCL has projected transmission and distribution losses at 17% for FY 2011-12, a reduction of 1% from the loss level of 18% projected for FY 2010-11 and reduction of 2.81% from the loss level of 19.81% in FY 2009-10.

In its ARR Petition for FY 2011-12, PSPCL has mentioned that it has taken a number of initiatives for reduction in T&D losses. PSPCL has briefed in its latest communication about the progress achieved in this respect and the proposed course of action in FY 2011-12. It has stated that 1.90 Lac AP connections are being converted from LVDS to HVDS. Out of this, 1,50,347 AP connections have already been provided with dedicated transformers as on March 31, 2011 and remaining connections are expected to be converted by June 30, 2011. In respect of shifting of meters outside consumer premises, PSPCL has set a target of shifting 51.62 Lac meters (including 41.88 Lac under non-APDRP Schemes in rural areas and 9.74 Lac in urban areas). Work on this has already begun and 9.05 Lac meters have been shifted outside the consumer premises till March 31, 2011. PSPCL has further submitted that it has prepared Low Cost Demand Side Management (DSM) plans under which Compact Fluorescent Lamps (CFLs) will be provided to 49 Lac domestic consumers @ Rs. 15 per CFL. Work on this scheme has already been allotted to two firms and PSPCL expects to achieve the target by January 31, 2012. Further, capacitors of 2,700 MVAR capacity would be added to reduce the T&D losses. PSPCL has already added capacitors of 1,680 MVAR capacity upto March 31, 2011 and the balance 1,020 MVAR shall be added by March 31, 2012. Further, work for the IT implementation plan for 47 towns has been awarded. The pilot of this plan is expected to be launched by June 30, 2011 and the complete rollout of this plan is targeted to be completed by October 28, 2011.

The Commission had fixed the T&D losses at 19% for FY 2011-12 in its Tariff Order for FY 2010-11. The Commission retains the T&D losses at 19% for FY 2011-12 as fixed earlier. As mentioned in Para 3.3 of this Tariff Order, the Commission is of the view that since the erstwhile Board has been unbundled into separate entities, losses are to be separately considered and approved

for these entities. Considering this as a transition phase, the Commission decides to stipulate only target T&D losses, with segregation into transmission loss and distribution loss 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 19% as the target set for FY 2011-12 in the Tariff Order for FY 2010-11 and based on the provisionally approved Transmission loss of 2.50% for PSTCL for FY 2011-12 in the Tariff Order for PSTCL for FY 2011-12, the target distribution losses (66 kV and below system) of PSPCL for FY 2011-12 works out to 16.92%, which the Commission approves provisionally. The Commission will revisit the distribution loss of PSPCL while undertaking the review/true-up for FY 2011-12.

4.3 Energy Requirement (Input)

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 approved by the Commission for FY 2011-12 are given in Table 4-5.

Table 4-5: Energy Requirement – FY 2011-12

(MU)

Sr. No.	Particulars	Projected by PSPCL for FY 2011-12	Approved by the Commission
1	2	3	4
1	Metered Sales within State	23494	24531
2	AP consumption	12253	10843
3	Total sales within State (1+2)	35747	35374
4	Common pool Sales	302	302
5	Outside State Sales	116	0
6	Total Sales (3+4+5)	36165	35676
7 (a)	T&D losses on Sr. No. 3 (in %)	17.00%	19.00%
7 (b)	T&D losses on Sr. No. 3 (in MU)	7322	8298
8	Total energy input required [6+7(b)]	43486*	43974
9	Energy at Transmission Periphery to be sold within the State (8-4-5)		43672

Sr. No.	Particulars	Projected by PSPCL for FY 2011-12	Approved by the Commission
1	2	3	4
10 (a)	Transmission Loss (in %)		2.50%
10 (b)	Transmission Loss (in MU)		1092
11	Energy available to PSPCL [9-10(b)]		42580
12 (a)	Distribution Loss (in %)		16.92%
12 (b)	Distribution Loss (in MU)		7206
13	Energy available for Sale to consumers within State [11-12(b)]		35374

**Wrongly depicted in the ARR Petition against the actual sum total of 43,487 MU*

The overall energy requirement as projected by PSPCL is lower by 488 MU than that approved by the Commission on account of difference in metered sales, Outside State sales, AP consumption and T&D losses determined separately by the Commission. The total energy requirement of the State, thus works out to 43,974 MU, which has to be met from PSPCL's own generation (thermal and hydel) including share from BBMB and purchases from Central Generating Stations and other sources. These issues are discussed in the succeeding paragraphs.

4.4 PSPCL's Own Generation

4.4.1 Thermal Generation:

PSPCL has projected gross thermal generation for FY 2011-12 at 2,296 MU, 9,750 MU and 7,035 MU for GNDTP, GGSSTP and GHTP, respectively, stating that the gross generation in FY 2011-12 of GNDTP, GGSSTP and GHTP has been worked out on the basis of envisaged availability in line with the planned maintenance schedule for various Units.

Plant Availability

PSPCL has submitted that -

- The Plant Availability of GNDTP for FY 2011-12 has been projected as 70.07%. The reason for reduced availability has been stated as scheduled Renovation and Modernisation work planned on Unit III & IV for a total of 304 days (Unit III - 91 days and Unit IV - 213 days) and also the annual over hauling of Unit I and II for a total of 60 days (Unit I – 30 days and Unit II – 30 days), besides consideration of estimated forced outages of 5% for the plant.

- The Plant Availability for GGSSTP for FY 2011-12 has been projected at 91.40%, based on the planned maintenance schedule of its Units in FY 2011-12 for a total of 90 days (Unit I - 25 days; Unit III - 45 days and Unit VI - 20 days) and also taking into account estimated forced outages of 4% for the plant.
- The Plant Availability for GHTP for FY 2011-12 has been projected at 92.82% on the basis of planned maintenance schedule of Unit II for 31 days and Unit IV for 30 days, and also taking into account estimated forced outages of 3% for the plant.

The availability of GNDTP, GGSSTP and GHTP Stage I (Unit I & II) and GHTP Stage II (Unit III & IV) based on maintenance schedules (excluding estimated forced outages as projected by PSPCL) for FY 2011-12, is calculated by the Commission as 75.14%, 95.90%, 95.77% and 95.90% respectively.

The Commission has assessed availability and generation for GNDTP and GGSSTP for FY 2011-12 based on the average of actual availability and generation for the past three years (FY 2007-08 to FY 2009-10). The availability based upon actual number of maintenance days and actual generation of GNDTP and GGSSTP for FY 2007-08, FY 2008-09 and FY 2009-10 along with average generation and availability of these three financial years have been worked out in Table 4-6.

Table 4-6: Availability and Generation – FY 2007-08 to FY 2009-10

Sr. No.	Station	FY 2007-08	FY 2008-09	FY 2009-10	Average
1	GNDTP				
	Generation (MU)	3008	2846	2723	2859
	Availability (%)	94.93%	92.74%	88.63%	92.10%
2	GGSSTP				
	Generation (MU)	9806	9611	10056	9824
	Availability (%)	93.97%	95.39%	94.43%	94.60%

Considering the projected availability in FY 2011-12 and the average availability and generation for FY 2007-08, FY 2008-09 and FY 2009-10 as worked out in Table 4-6, gross generation for FY 2011-12 has been computed in Table 4-7.

Table 4-7: Availability, Gross Generation and PLF of GNDTP and GGSSTP- FY 2011-12

Sr. No.	Station	Three year average availability	Three year average generation (MU)	Computed by the Commission for FY 2011-12		
				Availability as per maintenance Schedules for FY 2011-12	Generation (MU) (4x5) / 3	PLF (Calculated)
1	2	3	4	5	6	7
1	GNDTP	92.10%	2859	75.14%	2332	60.34%
2	GGSSTP	94.60%	9824	95.90%	9959	89.98%

The Commission, however, notes that the GHTP Unit III and GHTP Unit IV (GHTP Stage II Units) have become operational since October, 2008 and January, 2010 respectively, and data for generation and plant availability in respect of these units is not available for FY 2007-08, FY 2008-09 and FY 2009-10. The Commission has assessed availability and generation for GHTP Stage I (Unit-I & II) for FY 2011-12, based upon actual number of maintenance days and actual generation for FY 2006-07, FY 2007-08 and FY 2008-09, in Table 4-8.

Table 4-8: Availability, Gross Generation and PLF of GHTP Stage-I - FY 2011-12

Description	FY 2006-07	FY 2007-08	FY 2008-09	Average
Generation (MU)	3443	3508	3532	3494
Availability (%)	94.30%	96.10%	98.08%	96.16%

With the availability of 95.77% computed by the Commission for FY 2011-12 and the average generation and availability as calculated in Table 4.8 above for GHTP Stage-I (Unit I & II) having total installed capacity of 420 (2x210) MW, the Commission has worked out generation for GHTP Stage-I (Unit I & II) at 3,480 MU for FY 2011-12. Further, based on the maintenance schedule of GHTP Stage-II (Unit III & IV) with total installed capacity of 500 (2x 250) MW, the projected availability of these units works out to 95.90%. Now, since availability and generation data for the last three financial years in respect of

GHTP Stage II (Unit III & IV) is not available, the Commission decides to work out the estimated generation for FY 2011-12 in respect of GHTP Stage II (Unit III & IV) on pro-rata basis, taking the base values of availability and generation of GHTP Stage I (Unit I & II) as calculated above i.e. 95.77% and 3,480 MU. Thus, the estimated generation of GHTP Stage II (Unit III & IV) for FY 2011-12 works out to 4,148 MU ($3,480 \times 95.90 / 95.77 \times 500 / 420$). Total gross generation from the thermal generating plants during FY 2011-12 will, therefore, be as in Table 4-9.

Table 4-9: Gross Thermal Generation – FY 2011-12
(MU)

Sr. No.	Station	Approved Generation
1	2	3
1	GNDTP	2332
2	GGSSTP	9959
3 (a)	GHTP Unit-I&II	3480
3 (b)	GHTP Unit-III & IV	4148
	Total	19919

Accordingly, the Commission assesses the total gross thermal generation for FY 2011-12 as 19,919 MU.

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 by the Commission in its previous Tariff Orders from FY 2005-06 onwards. CERC has, in its notification No. L-7/145(160)/2008-CERC dated January 19, 2009, framed Terms and Conditions of Tariff Regulations, 2009, for electricity tariff for the five-year period beginning April 1, 2009 wherein operation norms for thermal plants have also been prescribed. These new norms of CERC have been followed by the Commission for estimating the fuel cost in previous Tariff Orders i.e. for FY 2009-10 and FY 2010-11. The Commission decides to follow these new norms for FY 2011-12 also. CERC has, however, not specified any norms for 110 MW Units and the Commission has in the case of GNDTP, adopted the norms specified for Tanda station of NTPC, which like GNDTP, has 4 Units of 110 MW each. The Commission notes that Units I and II of

GNDTP have achieved commercial operation on 31.5.2007 and 19.1.2006, respectively, after completion of Renovation and Modernisation works. The Commission has decided to adopt SHR value for GNDTP Units I & II as per CERC Tariff Regulations effective from April 1, 2009, in which CERC has also revised operational norms of Tanda thermal power station after its Renovation and Modernisation. Accordingly, the SHR value of 2,825 kcal/kWh has been taken for calculating fuel cost for GNDTP Units I & II. For Units-III and IV of GNDTP, the Commission has no reason to alter the norms adopted, as Renovation and Modernisation in respect of Unit III has been taken up and it is yet to commence for Unit IV.

Auxiliary Consumption and Net Generation

The Commission has adopted CERC norms for assessment of net generation of GGSSTP and GHTP. The Commission considered the 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 11.00%. For review of FY 2009-10 and for FY 2010-11 in the Tariff Order for FY 2010-11, the Commission fixed the auxiliary consumption of 11.00% for GNDTP Units. Accordingly, the Commission decides to fix auxiliary consumption for GNDTP, GGSSTP and GHTP at 11.00%, 8.50% and 9.00% respectively. Auxiliary consumption and net generation from the three thermal generating stations as projected by PSPCL and approved by the Commission for FY 2011-12 is given in Table 4-10.

Table 4-10: Generation and Auxiliary Consumption for Thermal Plants – FY 2011-12 (MU)

Sr. No.	Station	Projected by PSPCL			Approved by the Commission		
		Gross Gen.	Auxiliary Consumption	Net Gen.	Gross Gen.	Auxiliary Consumption	Net Gen.
1	2	3	4	5	6	7	8
1	GNDTP Units – I&II	2296	253	2043	2332	257	2075
	GNDTP Units-III&IV		11.00%			11.00%	
2	GGSSTP	9750	829	8921	9959	847	9112
			8.50%			8.50%	
3	GHTP	7035	633	6402	7628	687	6941
			9.00%			9.00%	
4	Total	19081	1715	17366	19919	1791	18128

Net thermal generation approved by the Commission is 18,128 MU against 17,366 MU projected by PSPCL.

4.4.2 Hydel Generation:

In the ARR Petition for FY 2011-12, PSPCL has projected hydel generation from its own stations for FY 2011-12 based on the three years average of gross generation for FY 2007-08, FY 2008-09 and FY 2009-10, which is also in line with the Commission's approach in its earlier Tariff Orders. The generation projected by PSPCL and the generation approved by the Commission is given below in Table 4-11.

Table 4-11: Own Hydel Generation – FY 2011-12

(MU)

Sr. No.	Station	Generation projected by the PSPCL for FY 2011-12	Actual Generation			Generation estimated by the Commission (Based on 3 year average)
			FY 2007-08	FY 2008-09	FY 2009-10	
1	2	3	4	5	6	7
1	Shanan	527	540	532	511	528
2	UBDC Stage 1	368	184	140	142	155
3	UBDC Stage 2		244	199	195	213
4	RSD	1360	1538	1474	1069	1360
5	MHP	1127	1362	1132	886	1127
6	ASHP	658	710	689	574	658
7	Micro Hydel	10	7	10	13	10
8	Total own generation (Gross)	4050	4585	4175	3390	4051

The Commission approves estimated gross generation of 4,051 MU from PSPCL's own hydel stations. The Commission also approves PSPCL's share from BBMB as projected by PSPCL. The Commission notes that PSPCL has projected the Common Pool share at 303 MU whereas, in the sales projection PSPCL has considered common pool sale at 302 MU. The Commission accepts the common pool share at 302 MU. The total hydel generation approved by the Commission is depicted in Table 4-12.

Table 4-12: Total Hydel Generation – FY 2011-12**(MU)**

Sr. No.	Station	Projected by PSPCL for FY 2011-12	Approved by the Commission
1	2	3	4
1	Shanan	527	528
2	UBDC	368	368
3	RSD	1360	1360
4	MHP	1127	1127
5	ASHP	658	658
6	Micro Hydel	10	10
7	Total own generation (Gross)	4050	4051
8	Auxiliary consumption and transformation loss (including RSD share and royalty in Shanan)	47	149 ¹
9	Total own generation (Net)	4003	3902
10	PSPCL share from BBMB		
11	PSPCL Share Net	4047	4047
12	Common Pool share	303	302
13	Net Share from BBMB	4350	4349
14	Total Net Hydro (Own + BBMB)	8352*	8251

1. Transformation losses @ 0.5% (20 MU), Auxiliary consumption @ 0.5% for RSD generation of 1,360 MU and UBDC Stage-1 generation of 155 MU (having static exciters) and @ 0.2% for others (13 MU), HP share @ 4.6% in RSD (63 MU) and Royalty to HP in Shanan (53MU).

**Wrongly depicted in the ARR Petition against the actual sum total of 8,353 MU*

The Commission, thus, approves net hydel generation of 8,251 MU for FY 2011-12.

4.4.3 Total Availability of energy from PSPCL's own stations and BBMB:

The approved net generation from own thermal and hydel stations of PSPCL and share from BBMB is given in Table 4-13.

Table 4-13: Net Own Generation – FY 2011-12**(MU)**

Sr. No.	Station	Energy available (ex-bus)
1	2	3
1	Thermal Stations	18128
2	Hydel Stations (Own)	3902
3	Share from BBMB (including 302 MU share of common pool consumers)	4349
4	Total own Availability	26379

The Commission approves the total energy available from PSPCL's own generating stations (thermal and hydel) including share from BBMB as 26,379 MU.

4.5 Purchase of Power

4.5.1 The total energy required to meet the demand during FY 2011-12 including Common Pool and Outside State sales is 43,974 MU as discussed in para 4.3. The energy available from own generating stations of PSPCL including its share from BBMB is 26,379 MU as approved in para 4.4.

4.5.2 The balance requirement of 17,595 MU (net) has to be met through purchases from Central Generating Stations and other sources. This is against a requirement of 17,767 MU (net) projected by PSPCL for FY 2011-12.

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 4-14.

Table 4-14: Energy Balance – FY 2011-12

(MU)			
Sr. No.	Particulars	Projected by PSPCL for FY 2011-12	Now approved by the Commission
1	2	3	4
A) Energy Requirement			
1	Metered Sales	23494	24531
2	Sales to Agriculture	12253	10843
3	Total Sales within the State	35747	35374
4	T&D Loss percentage	17.00%	19.00%
5	T&D losses	7322	8298
6	Sales to Common pool consumers	302	302
7	Outside State Sales	116	-
8	Total Requirement	43486*	43974
B) Energy Available			
9	Own generation (Ex-bus)		
(a)	Thermal	17367	18128
(b)	Hydro	4003	3902
10	Share from BBMB (incl.share of common pool consumers)	4349	4349
11	Purchase net	17767	17595
12	Total Availability	43486	43974

**Wrongly depicted in the ARR Petition as against actual sum total of 43,487 MU*

4.7 Fuel Cost

4.7.1 Fuel Cost Projected by PSPCL

PSPCL has projected fuel cost of Rs. 4,066.43 crore for a total generation of 19,081 MU during FY 2011-12 based on operational parameters and coal and oil prices as detailed in Table 4-15.

Table 4-15: Operation Parameters projected by PSPCL – FY 2011-12

Sr. No.	Station	PLF (%)	Station Heat Rate (kcal/kWh)	Transit loss of coal (%)	Coal Price excluding transit loss (Rs/MT)	Calorific value of coal (kcal/kg)	Price of Oil (Rs/KL)	Specific oil consumption (ml/kWh)	Calorific Value of oil (kcal/litre)
1	2	3	4	5	6	7	8	9	10
1	GNDTP	58	2902	2.00	3146	3974	41789	2.50	9400
2	GGSSTP	88.09	2633	2.00	3178	4015	30530	1.00	10000
3	GHTP	87.29	2500	2.00	3124	3950	41400	2.00	9500

4.7.2 PSPCL has submitted that the performance parameters and coal transit loss of all the three stations as submitted by PSPCL may be approved without any disallowance, on account of the following:

- Station Heat Rate (SHR) – For GNDTP, SHR has been projected at 2,902 kcal/kWh, in the light of the fact that the station is over 25 years old and has outlived its economic life. For GGSSTP, the SHR has been taken at 2,633 kcal/kWh considering the fact that two of the six Units at GGSSTP are more than 22 years old. For GHTP, SHR has been projected in line with the Tariff Regulations at 2,500 kcal/kWh. Subsequently, PSPCL in its letter no. 112 dated March 21, 2011 has intimated that for SHR study of thermal Units at GGSSTP, they have decided to appoint Central Power Research Institute (CPRI), Bengaluru as consultants.
- The price of oil for FY 2011-12 has been projected by considering an escalation of 10% twice over actual prices of first half of FY 2010-11 for the respective stations.
- The price of coal for FY 2011-12 has been projected by considering an escalation of 5% over price for second half of FY 2010-11 for the respective stations.

4.7.3 Fuel Cost approved by the Commission

Gross Generation

The gross generation of thermal plants for FY 2011-12 has been discussed in para 4.4.1 and summarized in Table 4-9.

Station Heat Rate

The CERC has laid down norms of gross SHR for coal based thermal power generating stations as given in Table 4-16.

Table 4-16: CERC Norms for Gross Station Heat Rate

Sr. No.	Unit size / Plant	SHR norm (kcal/kWh)
1	2	3
1	200/210/250 MW sets	2500
2	500 MW and above sets	2425
3	Talcher Thermal Power Station	2950
4	Tanda Thermal Power Station	2825

On the above basis, the Commission approves SHR at 2,500 kcal/kWh for GGSSTP and GHTP. As CERC has not specified any norm for 110 MW Units, the Commission has decided in para 4.4.1 to allow SHR of 2,825 kcal/kWh for GNDTP Unit I and II based on the CERC norms for Tanda TPS. In case of GNDTP Units III and IV, the Commission has decided to continue with SHR of 3,000 kcal/kWh as allowed for these two Units in its previous Orders.

As regards allowing of higher SHR for GGSSTP, the Commission will consider the same after receipt of study report of CPRI in the matter of SHR.

Coal Transit Loss

The Commission has permitted Transit Loss of 2% for all power plants in its earlier Orders, and the Commission approves the same for FY 2011-12 as well. However, no such loss is taken into account in the case of PANAM coal, which is priced on F.O.R. destination basis.

Price and Calorific Value of Coal & Oil

Fuel cost being a major item of expense, the actual calorific value, price and transit loss of coal and oil for the first six months of FY 2010-11 were verified and the results are given in Table 4-17.

**Table 4-17: Validated Calorific Value & Price of Coal & Oil and
Transit Loss of Coal – FY 2010-11**

Sr. No	Station	Calorific value of coal (kcal/kg)	Calorific Value of Oil (kcal/Ltr)	Price of Oil (Rs./kL)	Price of coal excluding transit loss (Rs./MT)	Transit Loss
1	2	3	4	5	6	7
1	GNDTP	3933	9400	34527	2722	0.43%
2	GGSSSTP	3951	10000	25244	2752	1.60%
3	GHTP	3935	9500	34215	2703	1.16%

In working out the fuel cost for FY 2011-12, the Commission has considered the price and calorific value of coal and oil as validated for the first six months of FY 2010-11. The price and calorific value of coal indicated above are the weighted average values of coal, including PANAM coal.

Specific Oil Consumption and Calorific Value of Oil

PSPCL has projected the Specific Oil Consumption at GNDTP, GGSSSTP and GHTP as 2.50, 1.00 and 2.0 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 Regulations effective from 1.4.2009, the Commission approves 1 ml/kWh specific oil consumption for GNDTP Unit I & II, GHTP and GGSSSTP. In case of GNDTP Units III & IV, the Commission has decided to continue with specific oil consumption of 3.5 ml/kWh as allowed in the earlier years, since Renovation & Modernisation in respect of Unit III has been taken up and for Unit IV it is yet to commence.

Based on the above, the fuel cost assessment for FY 2011-12 is given in Table 4-18.

Table 4-18: Fuel cost (Coal and Oil) – FY 2011-12

Sr. No.	Item	Derivation	Unit	Approved for FY 2011-12				
				GNDTP (Unit I & II)	GNDTP (Unit III & IV)	GGSTP	GHTP	Total
1	2	3	4	5	6	7	8	9
1	Generation	A	MU	1425*	907*	9959	7628	19919
2	Heat Rate	B	kcal/kWh	2825	3000	2500	2500	
3	Specific oil consumption	C	ml/kWh	1.00	3.50	1.00	1.00	
4	Calorific value of oil	D	kcal/litre	9400	9400	10000	9500	
5	Calorific value of coal	E	kcal/kg	3933	3933	3951	3935	
6	Overall heat	F = (A x B)	Gcal	4025625	2721000	24897500	19070000	
7	Heat from oil	G = (A x C x D) / 1000	Gcal	13395	29840	99590	72466	
8	Heat from coal	H = (F-G)	Gcal	4012230	2691160	24797910	18997534	
9	Oil consumption	I=(Gx1000)/D	KL	1425	3174	9959	7628	
10	Transit loss of coal	J	(%)	2.00	2.00	2.00	2.00	
11	Total coal consumption excluding transit loss	K=(Hx1000)/E	MT	1020145	684251	6276363	4827836	
12	Quantity of PANAM coal	L	MT	611063 [#]	388937 [#]	3884400	3459000	
13	Quantity of coal other than PANAM coal	M=K-L	MT	409082	295314	2391963	1368836	
14	Quantity of coal other than PANAM coal including transit loss	N=M/(1-J/100)	MT	417431	301341	2440779	1396771	
15	Total quantity of coal required	O=L+N	MT	1028494	690278	6325179	4855771	
16	Cost of oil	P	Rs./KL	34527	34527	25244	34215	
17	Cost of coal	Q	Rs./MT	2722	2722	2752	2703	
18	Total cost of oil	R=P x I / 10 ⁷	Rs. crore	4.92	10.96	25.14	26.10	67.12
19	Total cost of coal	S=O x Q/10 ⁷	Rs. crore	279.96	187.89	1740.69	1312.51	3521.05
20	Total Fuel cost	T=R+S	Rs. crore	284.88	198.85	1765.83	1338.61	3588.17
21	Per unit Cost	U=Tx10/A	Rs./kWh	2.00	2.19	1.77	1.75	1.80

*Gross generation of 2,332 MU apportioned on the basis of plant availability of 91.80% and 58.47% of GNDTP Unit I&II and GNDTP Unit III and IV respectively.

[#]PANAM coal quantity of 10,00,000 MT has been apportioned between GNDTP Unit I & II and GNDTP Unit III & IV on the basis of estimated gross generation.

Based on the generation and operational parameters approved by the Commission above, cost of fuel for FY 2011-12 works out to Rs. 3,588.17 crore for thermal generation of 19,919 MU (gross) as detailed in Table 4-18, which the Commission approves.

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. Punjab State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005 contain the FCA formula according to which any change in fuel cost would be passed on to the consumers with the prior approval of the Commission.

4.8 Power Purchase

4.8.1 Projection by PSPCL: PSPCL has projected power purchase cost of Rs. 6,349.74 crore for 18,815 MU (gross) in FY 2011-12. It has been submitted that the total energy requirement within the State is expected to increase approximately by 8.17%. PSPCL has projected an increase of 14.47% in net power purchase in FY 2011-12, i.e., from 15,521 MU in FY 2010-11 to 17,767 MU in FY 2011-12. PSPCL has projected energy availability for FY 2011-12 from various Central Generating Stations (CGS) based on average energy received during the last 3 financial years i.e. from FY 2007-08 to FY 2009-10.

4.8.2 Requirement of Energy through Purchase: As discussed in para 4.5.2, the requirement of 17,595 MU (net) has to be met through purchases from Central Generating Stations and other sources. The transmission loss external to the PSPCL and PSTCL system has to be added to arrive at the total quantum of energy to be purchased.

4.8.3 Transmission Loss External to PSPCL System and PSTCL System: For net purchase of 17,767 MU, PSPCL has shown gross purchase of 18,815 MU after adding average transmission loss of 5.57% as external to its system.

The Commission has, however, considered external loss at a weighted average of 4.83% based on the actual external loss in FY 2009-10. The gross

energy to be purchased, thus, works out to 18,488 MU (17,595 MU + external transmission losses of 893 MU) instead of 18,815 MU projected by PSPCL.

4.8.4 **Entitlement from Central Generating Stations:** In order to estimate the energy entitlement of PSPCL from different Central Generating Stations (CGSs), the Commission has considered the average of the actual energy purchased by PSPCL/the Board for three years (FY 2007-08, FY 2008-09 and FY 2009-10). Based on the above, the plant-wise energy available from NTPC, NHPC and NPC stations is depicted in Table 4-19, Table 4-20 and Table 4-21 respectively.

Table 4-19: PSPCL Entitlement from NTPC stations – FY 2011-12

Sr. No	Station	Capacity	Firm Allocation		Energy entitlement based on 3 year average	Actual Share allocation based on 3 year average
		MW	%	MW	(MU)	(%)
1	2	3	4	5	6	7
1	Anta (GF)	419	11.69	49	243	13.68
2	Anta (RF)				51	11.30
3	Anta (LF)				31	11.54
4	Auriaya (GF)	663	12.52	83	443	13.66
5	Auriaya (RF)				28	9.85
6	Auriaya (LF)				49	11.52
7	Dadri (GF)	830	15.9	132	630	16.69
8	Dadri (RF)				40	12.16
9	Dadri (LF)				138	12.23
10	Singrauli	2000	10	200	1732	11.67
11	Rihand I	1000	11	110	989	12.64
12	Rihand II	1000	10.2	102	926	11.85
13	Unchahar I	420	8.57	36	288	9.09
14	Unchahar II	420	14.28	60	520	15.98
15	Unchahar III	210	8.1	17	162	9.76
16	Farrakka (ER)	1600	1.85	30	277	9.35
17	Kahalgaon I (ER)	840	7.54	63	519	14.32
18	Kahalgaon 2 (ER)*	1000	8.31	83	822	8.02

* Energy entitlement and share allocation taken as projected by PSPCL for FY 2011-12 in the ARR Petition as past data is unavailable

Table 4-20: PSPCL Entitlement from NHPC stations – FY 2011-12

Sr. No.	Station	Capacity	Firm Allocation		Energy entitlement based on 3 year average	Share allocation based on 3 year average
		MW	%	MW	(MU)	(%)
1	2	3	4	5	6	7
1	Bairasul	180	46.5	84	290	46.50
2	Salal	690	26.6	184	818	26.63
3	Tanakpur	94	17.93	17	69	15.54
4	Chamera I	540	10.2	55	213	10.21
5	Chamera II	300	10	30	173	12.56
6	Uri	480	13.75	66	377	13.75
7	Dhauliganga	280	10	28	139	12.28
8	Dulhasti	390	8.28	32	244	11.16
9	Uri-II*	240	16.25	39	103	
10	Sewa-II*	120	14.17	17	44	
11	Parbati-III*	390	20.51	80	24	
12	Chamera-III*	231	9.96	23	86	

*Energy entitlement taken as projected by PSPCL for FY 2011-12 in the ARR as past data is unavailable

Table 4-21: PSPCL Entitlement from NPC stations – FY 2011-12

Sr. No	Station	Capacity	Firm Allocation		Energy entitlement based on 3 year average	Share allocation based on 3 year average*
		MW	%	MW	MU	%
1	2	3	4	5	6	7
1	NAPP	440	11.59	51	80	13.47
2	RAPP 3 & 4	440	22.73	100	463	24.63
3	RAPP 5&6*	440	10.20	45	257	10.41

*Energy entitlement and share allocation taken as projected by PSPCL for FY 2011-12 in the ARR as the past data is unavailable

4.8.5 **Cost of Power Purchase**

(a) Central Generating Stations (CGS)

PSPCL, in the ARR Petition for FY 2011-12, has submitted that the capacity charges for CGS have been considered based on the CERC Orders issued for the respective stations. CERC has also issued Tariff Orders for the period 2009-14 as per revised Tariff Regulations for 2009-14. Though the tariff is notified by CERC, plant wise breakup of capacity charges is not available. Hence, all the generating stations have provisionally raised bills with the existing charges. PSPCL has further submitted that it is envisaged that the tariff for such CGS may get increased by 10 % from the current level from FY 2009-10 onwards. PSPCL has not considered the impact of such envisaged increase in tariff in its ARR Petition, and has requested to consider the same at the time of true-up of power purchase expenses in the subsequent years.

The Commission notes that the Terms and Conditions of Tariff Regulations issued by CERC in January 2009 are applicable for all Central Generating Stations from April 1, 2009 onwards. However, CERC is yet to issue Tariff Orders for individual Central Generating Stations. All the Central Generating Stations are provisionally raising the bills at the tariff approved by CERC for FY 2008-09. In this Order, therefore, the Commission has decided to consider fixed charges as per bills for September, 2010. These fixed charges will be reviewed in the subsequent Orders of the Commission once the CERC issues Tariff Orders for the Central Generating Stations based on the new Tariff Regulations.

NTPC Stations

Fixed Cost

As per CERC Tariff Regulations, 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. The Annual Fixed Charges (AFC) in the case of NTPC stations have been considered as per bills for September, 2010.

Variable Cost

The Commission has assessed variable cost for FY 2011-12 as per NTPC bills for September, 2010 for different stations, except for Auraiya, in which case the variable cost has been assessed as per August, 2010 bills.

Incentive and Other Charges

The incentive and other charges are provisionally approved as projected by PSPCL for FY 2011-12.

NHPC Stations

Fixed Cost

CERC Tariff Regulations 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. AFC in the case of NHPC Stations has been taken as projected by PSPCL in its ARR Petition.

Variable Cost

The Commission has assessed variable cost for FY 2011-12 as per NHPC bills for September, 2010 for different Central Generating Stations. In case of Uri-II, Parbati-III and Chamera-III where the bills are not available, variable cost has been taken as projected by PSPCL in the ARR Petition for FY 2011-12.

Incentive and Other Charges

The incentive and other charges are provisionally approved as projected by PSPCL for FY 2011-12.

NPC Stations

The power purchase rate for NAPP, RAPP-3 & 4 and RAPP-5 & 6 Stations have been considered by the Commission as per bills for September, 2010.

(b) Power Purchase Tariff for New and Renewable Sources of Energy (NRSE) Plants (including Jalkheri) and Short-Term Power Purchase within the State and rate of power purchase from NJPC and Tehri

Quantum of power purchase from NRSE (including Jalkheri) has been taken on three years (FY 2007-08 to FY 2009-10) average basis, and the rate of

power purchase from NRSE (including Jalkheri) and the quantum and rate of short-term power purchases within the State are provisionally approved as per PSPCL's projections.

The energy entitlement and the actual power allocation from NJPC and Tehri have been taken on the basis of average for 3 years (FY 2007-08 to FY 2009-10). The annual fixed charges for NJPC and Tehri have been considered as projected by PSPCL in its ARR Petition. The variable charges for NJPC and Tehri are based on the bills for September, 2010.

(c) Power Purchase Rates for Banking

PSPCL has intimated net power purchase under banking from HPSEB, Rajasthan, UPCL, J&K and banking through traders as 508 MU. The Commission provisionally accepts the net power purchase and its rate/cost under banking from HPSEB, J&K, UPCL and Rajasthan and banking through traders as per PSPCL's projections.

(d) Rates for Power Purchase from New Plants

Quantum and the cost of power purchase from new plants (Koteshwar, Durgapur TPS, Udipi TPP, Pragati –III Gas Plant, Bawana) have been provisionally approved as projected by PSPCL.

(e) Power Purchase from Traders and through UI

The power available from all Central Generating Stations and other sources including banking is 16,411 MU. Taking into account the gross power purchase requirement of 18,488 MU, there is an additional requirement of 2,077 MU, which the Commission allows to be procured on short-term basis.

The Commission in the previous Tariff Orders had mentioned that additional power purchase through traders or UI at high cost and supplying to any consumer category is not commercially viable. Hence, PSPCL should focus on demand side management and effect power purchases in a judicious manner.

For the purpose of approving the rate for short-term power purchase, the Commission has analysed the monthly reports on short-term transactions of electricity published by Market Monitoring Cell (MMC) of CERC. Based on such monthly Reports, the Commission has worked out the weighted average price of short-term bilateral transactions for the period from April, 2010 to January, 2011 as 485 paise per unit, which the Commission observes to be reasonably realistic for short-term power purchase. Accordingly, the Commission decides to limit the cost of short-term power purchase from traders/UI at the rate of 485 paise per unit for FY 2011-12. On this basis, for the purchase of 2,077 MU on short-term basis, the Commission works out the additional power purchase cost of Rs. 1,007.35 crore for FY 2011-12. Further, any power purchase in excess of approved quantum will be admissible only at the above mentioned ceiling rate of 485 paise per unit for FY 2011-12.

The Commission reiterates that PSPCL needs to purchase power in a judicious and economic manner and also resort to demand management practices, if necessary, to maintain its commercial viability.

(f) Inter-State Transmission Charges

PSPCL has projected transmission charges payable in FY 2011-12 to PGCIL as Rs. 252.42 crore, which the Commission approves. In addition, the Commission also approves Open Access charges (for banked energy) of Rs. 33.74 crore for FY 2011-12. PSPCL has also projected the Open Access charges (for long-term and short-term power purchase through traders) at Rs. 83.77 crore. The Commission approves Rs. 70.15 crore on proportionate basis for traded power of 3,229 MU against 3,856 MU projected by PSPCL, as short-term purchase requirement has been reduced to 2,077 MU as compared to 2,704 MU projected by PSPCL.

Based on the above, the cost of power purchase for FY 2011-12 is worked out as detailed in Table 4-22.

Table 4-22: Power Purchase Cost – FY 2011-12

Sr. No.	Source	Purchase (MUs)	AFC (Rs. crore)	PSPCL share (%)	VC (Ps/ Unit)	FC (Rs. crore)	VC (Rs.crore)	Others (Rs.crore)	Total (Rs.crore)
1	2	3	4	5	6	7	8	9	10
I	NTPC								
1	ANTA (G/F)	243	101.96	13.68	229.49	13.95	55.77	1.51	71.23
2	ANTA (R/F)	51		11.3	351.19		17.91		17.91
3	ANTA (L/F)	31		11.54	751.59		23.3		23.3
4	AURAIYA (G/F)	443	136.87	13.66	242.76	18.7	107.54	5.24	131.48
5	AURAIYA (R/F)	28		9.85	417.88		11.7		11.7
6	AURAIYA (L/F)	49		11.52	878.8		43.06		43.06
7	DADRI GAS (G/F)	630	185.4	16.69	264.6	30.94	166.7	10.43	208.07
8	DADRI (R/F)	40		12.16	423.91		16.96		16.96
9	DADRI (L/F)	138		12.23	760.7		104.98		104.98
10	SINGRAULI	1732	352.49	11.67	139.2	41.14	241.09	14.72	296.95
11	RIHAND –I	989	344.02	12.64	161.38	43.48	159.6	10.71	213.79
12	RIHAND –II	926	551.89	11.85	166.49	65.4	154.17	10.78	230.35
13	UNCHAHAR-I	288	145.17	9.09	199.44	13.2	57.44	4.61	75.25
14	UNCHAHAR-II	520	177.87	15.98	193.4	28.42	100.57	7.84	136.83
15	UNCHAHAR-III	162	148.1	9.76	188.82	14.45	30.59	1.85	46.89
16	FARAKKA	277	518.36	9.35	324.427	48.47	89.87	1.09	139.43
17	KAHALGAON – I	519	316.39	14.32	198.37	45.31	102.95	3.44	151.7
18	KAHALGAON – II	822	1070.47	8.02	191.53	85.85	157.44	4.54	247.83
	Sub Total	7888				449.31	1641.64	76.76	2167.71
II	NHPC								
19	BAIRA SIUL	290	53.01	46.5	38.9	10.4	11.28	0.93	22.61
20	SALAL	818	176.62	26.63	32.9	24.82	26.91	3.39	55.12
21	TANAKPUR	69	47.18	15.54	59.9	4.67	4.13	0.5	9.3
22	CHAMERA-I	213	200.66	10.21	69.3	7.42	14.76	1.42	23.6
23	CHAMERA-II	173	348.78	12.56	147	16.92	25.43	2	44.35
24	URI	377	274.28	13.75	61	24.34	23	4.02	51.36
25	DHAULIGANGA	139	178.58	12.28	90.5	9.94	12.58	1.65	24.17
26	DULHASTI	244	849.78	11.16	256.3	42.67	62.54	6.63	111.84
27	SEWA- II	44	141.53		239.4	7.56	10.53	0.02	18.11
28	Uri- II	103			443.02		45.63		45.63
29	PARBATI-III	24			443.02		10.63		10.63
30	CHAMERA-III	86			443.02		38.1		38.1
	Sub Total	2580				148.74	285.52	20.56	454.82
III	NPC								
31	NAPP	80		13.47	204.07		16.33		16.33
32	RAPP-3 & 4	463		24.63	249.97		115.74	2.93	118.67
33	RAPP-5&6	257		10.41	302.29		77.69		77.69

Sr. No.	Source	Purchase (MUs)	AFC (Rs. crore)	PSPCL share (%)	VC (Ps/ Unit)	FC (Rs. crore)	VC (Rs.crore)	Others (Rs.crore)	Total (Rs.crore)
1	2	3	4	5	6	7	8	9	10
	Sub Total	800					209.76	2.93	212.69
IV	Other Sources								
34	Co-Gen. incl. Jalkheri	227			414.97		94.2		94.2
35	Short term power purchase within Punjab	103			437.36		45.05		45.05
36	NJPC	766	1312.43	11.58	114.1	66.65	87.4	11.87	165.92
37	Tehri*	229	657	8.81	250	31.65	57.25	5.61	94.51
	Sub-total	1325				98.3	283.9	17.48	399.68
V	Net Banking								
38	Net Banking with HPSEB, RSEB, UPCL, J&K & through Traders	508			286		145.29		145.29
	Sub Total	508			286		145.29		145.29
39	Open Access Charges of Banking							33.74	33.74
VI	New Plants								
40	Koteshwar (THDC)	52			443.02		23.04		23.04
41	Udipi TPP(UPCL)	697			362.91		252.95		252.95
42	Pragati-III Gas Plant Bawana	840			308.39		259.05		259.05
43	Durgapur (DVC)	569			362.91		206.5		206.5
	Sub Total	2158					741.54		741.54
44	Traders (Long Term)	692			338.92		234.53		234.53
45	Mallana-II (PTC)	394			269		105.99		105.99
46	Karcham Wangtoo (PTC)	58			443.02		25.7		25.7
47	Teesta-III (PTC)	8			443.02		3.54		3.54
	Sub-total	1152					369.76		369.76
VII	Open access Charges for traders							70.15	70.15
VIII	Traders (Short Term)								
48	Short term purchase through traders	2077			485		1007.35		1007.35
IX	Other Charges								
49	PGCIL						252.42		252.42
	Total	18488				696.35	4937.18	117.73	5751.26

* Fixed Charges as per bill are Rs.18,000/MW/day and computed as Rs.657 crore per year taking plant capacity as 1,000 MW.

The Commission approves power purchase cost at Rs. 5,751.26 crore for power purchase of 18,488 MU (gross).

4.9 Employee Cost

4.9.1 PSPCL has projected its employee cost at Rs. 3,607.75 crore for FY 2011-12 net of capitalization of Rs. 130 crore. This is inclusive of Rs. 285 crore on account of pay arrears and Rs. 80 crore on account of BBMB share. During the presentation by PSPCL dated March 11, 2011, it was submitted that the employee cost was overstated by Rs. 3 crore on account of medical allowance. Also, in its subsequent submissions, PSPCL has stated that the GoP has notified that 40% of the total arrears amounting to Rs. 342 crore are payable in FY 2011-12. Thus, PSPCL's claim stands revised to Rs. 3,661.75 crore. The details of revised employee expenses projected by PSPCL are shown in Table 4-23 below:

**Table 4-23: Employee cost projected by PSPCL – FY 2011-12
(Rs. crore)**

Sr. No.	Particulars	Projections for FY 2011-12
1	2	3
1	Basic Pay	1165.00
2	Overtime	12.60
3	Dearness Allowance	702.00
4	Fixed medical Allowance	32.00
5	Other Allowances	256.00
6	Bonus/ Generation Incentive	47.25
7	Medical Expenses Reimbursement	15.75
8	Workman's compensation	0.00
	Total (1 to 8)	2230.60
	Terminal Benefits	
9	Earned Leave Encashment	88.75
10	Gratuity	179.65
11	Commutation of Pension	0.00
12	Ex-gratia	0.00
	Total (9 to 12)	268.40
	Pension Payments	
13	Basic Pension	750.00
14	Dearness pension	0.00
15	Dearness Allowance	0.00
16	Any other expense	120.75
	Total	870.75
	Total Expenses	3369.75
Less:	Amount capitalised	130.00
	Net amount	3239.75

Sr. No.	Particulars	Projections for FY 2011-12
1	2	3
Add:	Prior Period	0.00
Add:	BBMB share	80.00
	Net Employee's Cost	3319.75
	Arrear of Pay Revision	342.00
	Total	3661.75

4.9.2 As regards the basis on which these costs have been projected, PSPCL has submitted that:

- a. PSPCL has considered an escalation of 3% over the actual employee expenses of FY 2010-11 for projecting employee expenses for FY 2011-12.
- b. The same assumptions in escalations have been used to project the terminal benefits as also the expenses of BBMB.

4.9.3 PSPCL has further submitted that it has taken a number of measures for controlling employee cost, such as:

- Fresh recruitments against retirement/death cases frozen since 1999.
- Only very specific need based technical manpower is being recruited to take over the operations of PSPCL.
- Complete ban on creation of new posts/charges.
- The current or new expansion projects are also getting executed through the existing man power, which has enhanced the employee productivity. Induction of technical personnel has been taken to ensure that the employee productivity is maintained at high standards.

4.9.4 The provisions of the PSERC Tariff Regulations 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.

Regulation 28(8) also provides for consideration of any exceptional increase in employee cost on account of pay revision.

PSPCL has projected terminal benefits and BBMB share amounting to Rs. 1,168.54 crore. The Commission allows the same on actual basis as per PSERC Tariff Regulations.

4.9.5 The other employee expenses are projected at Rs. 2,151.21 crore for FY 2011-12. The Commission has been applying WPI base of 1993-94 in the past. However, the latest WPI with base of 2004-05 has now been stabilised and is available till February 2011. The Commission has decided to apply this latest base for allowing annual WPI increase for FY 2011-12. The average annual WPI increase for the FY 2010-11 would only be available next year and it is the normal practice of the Commission to apply the WPI increase of the previous year while allowing enhancement in employee cost. Accordingly, based on the WPI indices available for 11 months (April 2010 to February 2011), the Commission has calculated the average annual increase in WPI of 8.91%. The other employee cost approved for PSPCL for FY 2010-11 is Rs. 1,380.81 crore. Applying the WPI increase of 8.91%, the other employee cost of PSPCL works out to Rs. 1,503.84 crore. Thus the Commission approves other employee expenses of Rs. 1,503.84 crore for PSPCL for FY 2011-12.

4.9.6 PSPCL had claimed pay arrears of Rs. 285 crore for FY 2011-12. However, consequent upon notification by GoP, PSPCL revised its claim of arrears to Rs. 342 crore. The Commission has been determining employee cost of the Board on a normative basis in accordance with its Regulations and thus, the pay arrears also have to be allowed on a normative basis. The Commission, in the Tariff Order for FY 2010-11, determined that the employee cost allowed by the Commission is 28.48% lower than the amount actually claimed by the Board/PSPCL taking into account the employee cost approved for FY 2007-08, FY 2008-09 and FY 2009-10 (projections). The Commission is, therefore, of the view that PSPCL's claim of Rs. 342 crore as pay arrears during FY 2011-12 also needs to be reduced by 28.48%. A reduction of this order amounts to Rs. 97.40 crore and the allowable cost on this account would be Rs. 244.60 crore.

4.9.7 The Commission, in its Tariff Order for FY 2010-11, had directed the successor entities to ensure implementation of manpower study. It had also

deducted Rs. 100 crore from the allowable employee cost on account of the continuing failure of the Board to finalize and implement the study on rationalisation of manpower. Unfortunately, the failure to rationalise manpower continues. Accordingly, the Commission has disallowed an amount of Rs. 93.31 crore on account of PSPCL's continuing failure to finalise the study on rationalisation of manpower in para 3.10.5 of this Tariff Order.

Thus, the Commission allows the total employee cost of Rs. 2,916.98 (1,168.54 + 1,503.84 + 244.60) crore for FY 2011-12.

The Commission again directs PSPCL to finalise the Work Study Report on Manpower and submit implementation Action Plan to the Commission.

4.10 Repair & Maintenance (R&M) Expenses

4.10.1 In the ARR Petition for FY 2011-12, PSPCL has projected R&M expenses at Rs. 414.74 crore (net of capitalisation of Rs. 0.47 crore). This is inclusive of Rs. 38.52 crore towards R&M expense for asset addition during FY 2011-12. PSPCL has submitted that an escalation factor of 5% over the revised estimates for FY 2010-11 has been considered by PSPCL for projecting R&M expenses for FY 2011-12. PSPCL has further submitted that the assets created by erstwhile PSEB are mainly old assets, which require significant amount of repair and maintenance activity. Therefore, PSPCL requested the Commission to approve the R&M expenses projected by PSPCL without any disallowance.

4.10.2 The Commission has been approving the R&M expenses as per the provisions of PSERC Tariff Regulations. Regulation 28 (4) (b) of the PSERC Tariff Regulations provides for adjusting base O&M expenses in proportion to increase in WPI to determine O&M expenses for subsequent years. The base R&M expenses of Rs. 367.10 (Rs. 360.28 crore as the R&M expense approved for FY 2010-11 and Rs. 6.82 crore as the additional R&M expenses for asset addition during that year) crore have been considered for FY 2011-12. Applying the WPI increase of 8.91% (as discussed in para 4.9.5), the R&M expenses for FY 2011-12 work out to Rs. 399.81 crore.

4.10.3 As regards claim of Rs. 38.52 crore of PSPCL towards R&M expenses for additional assets of Rs. 2,399.97 crore, likely to be added during FY 2011-12 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.

As the claim of PSPCL of Rs. 376.22(414.74-38.52) crore is within the allowable limit, R&M expenses are allowed at Rs. 376.22 crore for PSPCL for FY 2011-12.

Accordingly, the Commission approves Rs. 376.22 crore as R&M expenses for FY 2011-12.

4.11 Administrative & General (A&G) Expenses

4.11.1 In the ARR Petition for FY 2011-12, PSPCL has projected A&G expenses at Rs. 87.95 crore, net of capitalisation of Rs. 18.45 crore. PSPCL has submitted that it has not considered WPI for projection of A&G expenses for FY 2011-12, as these expenses are incidental towards governing the entire power system operations in the State. PSPCL requested the Commission to allow the projected A&G expenses without any disallowance.

4.11.2 The Commission had been approving the A&G expenses as per the provisions of PSERC Tariff Regulations. Regulation 28 (4) (b) of the PSERC Tariff Regulations provides for adjusting base A&G expenses in proportion to increase in WPI to determine A&G expenses for subsequent years. The base A&G expenses of Rs. 81.33 crore (Rs. 79.80 crore as the A&G expense approved for FY 2010-11 and Rs. 1.53 crore as the additional A&G expenses for asset additions during that year) have been considered for FY 2011-12. Applying the WPI increase of 8.91% (as discussed in para 4.9.5), the A&G expenses for FY 2011-12 work out to Rs. 88.58 crore.

4.11.3 However, PSPCL has claimed A&G expenses of Rs. 87.95 crore for FY 2011-12. The Commission notes that the claim of PSPCL is within the permissible norms prescribed in Regulation 28 of the PSERC Tariff Regulations and is therefore allowed.

Accordingly, the Commission approves the A&G expenses of Rs. 87.95 crore for FY 2011-12.

4.12 Depreciation Charges

4.12.1 PSPCL has projected depreciation charges of Rs. 891.92 crore for FY 2011-12 based on asset addition of Rs. 1,605.41 crore in FY 2010-11 and the assets of Rs. 19,934.80 crore as on April 01, 2011. However, the Commission has approved asset addition of Rs. 710.12 crore in FY 2010-11, as discussed in para 3.11.2 of this Order. Therefore, the value of assets as on April 01, 2011 works out to Rs. 19,106.05 crore. Approved asset addition of Rs. 710.12 crore in FY 2010-11 has been apportioned in the same ratio among the different asset categories as projected by PSPCL in its ARR Petition.

4.12.2 The Commission has applied the average percentage rates of depreciation (net) for FY 2011-12, which are derived from the audited accounts of FY 2009-10. In addition, the Commission has applied a depreciation rate of 4.81% to the transmission assets of PSPCL, as applied to the transmission assets of PSTCL, to determine the depreciation charges of transmission assets of PSPCL. By applying these rates, depreciation for FY 2011-12 works out to Rs. 841.04 crore for assets of Rs. 19,106.05 crore as on April 01, 2011. Details of function-wise depreciation charges are given in Table 4-24 below:

Table 4-24: Depreciation Charges - FY 2011-12

Sr. No.	Item	Assets as on April 1, 2010 as approved by Commission (Rs. crore)	Depreciation Rate (%)	Depreciation for FY 2010-11 (Rs. crore)	Assets as on April 1, 2011 as approved by Commission (Rs. crore)	Depreciation Rate (%)	Depreciation for FY 2011-12 (Rs. crore)
1	2	3	4	5	6	7	8
1	Thermal	5688.79	5.17%	294.37	5688.79	5.17%	294.37
2	Hydro	5985.27	2.28%	136.45	5985.27	2.28%	136.45
3	Internal combustion	2.68	0.00%	0.00	2.68	0.00%	0
4	Transmission	0.00	0.00%	0.00	66.35	4.81%	3.19
5	Distribution	6524.09	5.65%	368.89	7167.86	5.65%	405.29
6	Others	195.10	0.89%	1.74	195.10	0.89%	1.74
	Total	18395.93		801.45	19106.05		841.04

The Commission, therefore, approves depreciation charges of Rs. 841.04 crore for FY 2011-12.

4.13 Interest and Finance Charges

4.13.1 PSPCL has claimed interest and finance charges of Rs. 2,203.27 crore (net) for FY 2011-12. The details are shown in Table 4-25 below:

Table 4-25: Interest and Finance Charges Projected by PSPCL- FY 2011-12
(Rs. crore)

Sr. No.	Description	Interest as depicted in ARR
1	2	3
1	Interest on Institutional Loans	985.27
2	Interest on GoP Loans	-
3	Interest on GPF	170.00
4	Lease rentals	-
5	Interest to Consumers	196.08
6	Sub-Total	1351.35
7	Interest on Working Capital Loans	938.47
8	Discount to Consumers for Advance Payment	-
9	Finance Charges for Loans	25.00
10	Total (6+7+8+9)	2314.82
11	Less; Capitalisation	111.55
12	Net Interest and Finance Charges	2203.27

However, during the presentation by PSPCL on March 11, 2011, it was submitted that the Interest on Consumer Deposits was understated by Rs. 33 crore. Thus the revised claim of PSPCL on account of Interest and Finance Charges is Rs. 2,236.27 (2,203.27+33) crore.

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

4.13.2 Investment Plan

PSPCL has proposed an investment plan of Rs. 2,990 crore for FY 2011-12. Out of this Rs. 840 crore is on account of generation works, Rs. 300 crore is on account of transmission works (66 kV and 33 kV) and the balance Rs. 1,850 crore is on account of distribution schemes. PSPCL has clarified that the proposed investment of Rs. 300 crore in transmission is against 66 kV and 33 kV works which is to be carried out by PSTCL on behalf of PSPCL.

It is observed that PSPCL has proposed an investment plan of Rs. 2,595.07 crore for FY 2010-11, against which actual capital expenditure reported by PSPCL up to January 2011 is Rs. 569.76 crore. The Commission has approved an investment plan of Rs. 700 crore for FY 2010-11. Considering this level of investment in the previous year, it is unlikely that PSPCL will be able incur the projected capital expenditure of Rs. 2,990.00 crore for FY 2011-12. The Commission approves an investment plan of Rs. 1,000 crore at present for FY 2011-12. Increase in capital expenditure if any, will be considered by the Commission at the time of review of FY 2011-12. After adjustment of consumer contribution of Rs. 114.89 crore, considered at the level of FY 2010-11, the loan requirement for undertaking the investment plan in FY 2011-12 works out to Rs. 885.11 (1,000 – 114.89) crore.

In the ARR Petition for FY 2011-12, the opening balance of loan (other than WCL and GoP loans) is shown as 8,013.22 crore and interest on loans (other than WCL and GoP loans) availed by the PSPCL is shown as Rs. 985.27 crore. The Commission in Table 3-13 of this Tariff Order has approved closing balance of Rs. 6,003.26 crore as loans (other than WCL and GoP loans) for PSPCL for FY 2010-11. Considering the opening balance of loans (other than WCL and GoP loans) of Rs. 6,003.26 crore for FY 2011-12, the interest on loans (other than WCL and GoP loans) works out to Rs. 656.24 crore as shown in Table 4-26 below:

Table 4-26: Interest on Loan (Other than WCL and GoP Loans) - FY 2011-12
(Rs. crore)

Sr. No.	Particulars	Loans as on April 1, 2011	Receipt of Loan during FY 2011-12	Repayment of Loan during FY 2011-12	Loans as on March 31, 2012	Amount of Interest
1	2	3	4	5	6	7
1	As per data furnished in ARR Petition (other than WCL and GoP Loans)	8013.22	2990.00	675.64	10327.58	985.27
2	Approved by the Commission (other than WCL and GoP Loans)	6003.26	885.11	675.64	6212.73	656.24

4.13.3 Interest on GoP Loans

PSPCL has not claimed any interest on account of GoP loans. As per GoP's letter dated April 15, 2010, the outstanding loan of Rs. 520.07 crore in FY 2010-11 has been completely adjusted by the GoP against unpaid subsidy. Thus there is no interest liability on account of GoP loans.

4.13.4 Interest on Loans taken to replace re-called GoP Loans

The interest on loans of Rs. 3,022.10 (1,362.00 +1,140.03 +520.07) crore raised to replace re-called GoP loans adjusted against unpaid subsidy by the GoP is allowed at an average rate of 9.09% per annum on short term loans. Thus, interest of Rs. 274.71 crore is approved on this account.

4.13.5 Interest on G.P. Fund

PSPCL has claimed interest of Rs.170 crore on GP Fund accumulations. The interest of Rs.170 crore on G.P. Fund, being a statutory payment, is allowed as claimed by PSPCL.

4.13.6 Finance Charges

PSPCL has claimed finance charges of Rs. 25 crore which works out to 0.84% of fresh borrowings of Rs. 2,990 crore. The Commission has however, approved Rs. 885.11 crore as the loan requirement for FY 2011-12. The finance charges for this loan requirement at the rate of 0.84% works out to Rs. 7.43 crore, which is allowed for FY 2011-12.

4.13.7 Interest on Consumer Security Deposits

According to Regulation 17 of the PSERC (Electricity Supply Code and Related Matters) Regulations, 2007, the consumers of PSPCL are to be paid interest on their security deposits with PSPCL with effect from January 01, 2008. PSPCL has claimed interest on consumer security deposit amounting to Rs. 196.08 crore for FY 2011-12, which will be payable in FY 2012-13. The Commission will accordingly consider the same in the subsequent Tariff Order.

4.13.8 Capitalisation of Interest and Finance Charges

The Commission, as per past practice, has capitalised the interest expenses, excluding interest on working capital, in the ratio of net works in progress to

total capital expenditure. Based on this principle and the expenditure as reflected in the revised estimates, the Commission approves capitalisation of interest and finance charges of Rs.47.38 crore for FY 2011-12.

4.13.9 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 Rs. 9,562.48 crore as on April 01, 2011 with an interest liability of Rs. 938.47 crore.

The Commission has determined the working capital requirement of Rs. 1,866.23 crore, as per PSERC Tariff Regulations. By applying the State Bank Advance Rate of 11.75% as on April 01, 2010, the interest thereon works out to Rs. 219.28 crore, as shown in Table 4-27 below:

**Table 4-27: Interest on Working Capital Requirement - FY 2011-12
(Rs. crore)**

Sr. No	Particulars	Amount
1	2	3
1	Two months Fuel Cost	598.03
2	One month Power Purchase Cost	479.27
3	One month Employee Cost	243.08
4	One month A&G Cost	7.33
5	One month R&M Cost	31.35
6	Maintenance Spare @ 15% of O&M expense	507.17
7	Total Working Capital Required	1866.23
8	State Bank Advance Rate as on April 01, 2010	11.75%
9	Interest on Working Capital Loan	219.28

Accordingly, the Commission approves interest of Rs. 219.28 crore on working capital requirement for FY 2011-12.

4.13.10 Diversion of Capital Funds

The Commission, in paras 2.15.7 and 2.15.8 of this Order, has re-determined the diversion of capital funds for revenue purposes at Rs. 2,458.56 crore based on the Boards' Audited Accounts for FY 2009-10. Of this amount, net diversion carrying interest bearing liability of Rs. 1,821.21 crore is estimated on the same basis for FY 2011-12. Applying

an interest at the rate of 13.20% (being average rate of interest on GoP loans) on diverted funds of Rs. 1821.21 crore, the interest costs work out to Rs. 240.40 crore. The share of PSPCL out of Rs. 240.40 crore works out to Rs. 213.42 crore based on the ratio of closing balance of fixed assets of PSPCL and PSTCL for FY 2010-11. The Commission retains its decision to disallow interest of Rs. 88.78 crore of PSPCL based on the ratio of a similar disallowance in FY 2009-10. Balance disallowance of Rs. 124.64 crore is to the account of GoP. As discussed in para 3.15 of this Tariff Order, GoP is liable to pay Rs. 329.01 crore to PSPCL on account of interest on diverted capital funds towards revenue purposes up to FY 2010-11. Thus, GoP is liable to pay total amount of Rs. 453.65(329.01+124.64) crore to PSPCL up to FY 2011-12. This is being carried forward to para 6.4 of Chapter 6.

The interest and finance charges allowed for FY 2011-12 are summarized in Table 4-28 below:

Table 4-28: Interest and Finance Charges - FY 2011-12

(Rs. crore)

Sr. No.	Particulars	Loans as on April 01, 2011	Receipt of Loans	Repayment of Loans	Loans as on March 31, 2012	Interest Approved by the Commission
1	2	3	4	5	6	7
1	Approved by the Commission (Other than WCL and GoP Loans)	6003.26	885.11	675.64	6212.73	656.24
2	GoP Loans	-	-	-	-	-
3	Interest on Loans taken to replace GoP loans of Rs. 3022.10 crore					274.71
4	Interest on GPF					170.00
5	Total(1+2+3+4+5)	6003.26	885.11	675.64	6212.73	1100.95
6	Add: Finance Charges					7.43
7	Add: Interest on Consumer Security Deposits					-
8	Gross Interest and Finance Charges (5+6+7)					1108.38
9	Less Capitalisation					47.38
10	Net Interest and Finance Charges (9-10)					1061.00
11	Add: Interest on Working Capital					219.28
12	Total Interest					1280.28
13	Less: Disallowance on a/c of diversion: a) PSPCL- Rs. 88.78 crore b) GoP - Rs. 124.64 crore					213.42
14	Balance Interest and Finance Charges					1066.86

Accordingly, the Commission approves net Interest and Finance charges of Rs. 1,066.86 crore for FY 2011-12.

4.14 Interest Cost on the Approved Revenue Gap for FY 2009-10

In the ARR Petition for FY 2011-12, PSPCL has submitted that it has to raise short term loans from the market to meet the gap on account of revenue deficits. The Commission accordingly allows interest cost on the approved revenue gap determined during true-up of FY 2009-10 in accordance with PSERC Tariff Regulations.

The Commission notes that on the basis of review of FY 2009-10 in the Tariff Order for FY 2010-11, the revenue gap for FY 2009-10 was determined at Rs. 253.26 crore. However, in the true up of FY 2009-10, which forms a part of this Order, the gap for FY 2009-10 has been determined at Rs. 1,185.52 crore. Out of Rs. 1,185.52 crore, Rs. 84.04 crore pertains to additional fuel cost allowed for trial run of GHTP Stage II for FY 2008-09. There is justification for allowing carrying cost on the amount of Rs. 84.04 crore for six months for FY 2008-09, one year for FY 2009-10, one year for FY 2010-11 and six months for FY 2011-12. The short term PLR of SBI on April 01, 2008 and April 01, 2009 was 12.25% and the Advance Rate of SBI on April 01, 2010 was 11.75%. Applying these rates to Rs. 84.04 crore for periods mentioned above, the carrying cost works out to Rs. 30.25 crore. There is justification for allowing carrying cost on the balance gap of Rs. 1,101.48 (1,185.52 – 84.04) crore for six months for FY 2009-10, one year for FY 2010-11 and six months for FY 2011-12. Applying the above interest rates to Rs. 1,101.48 crore for the periods mentioned above, the carrying cost works out to Rs. 261.60 crore. Thus, the total interest cost for the approved revenue gap of Rs. 1,185.52 crore for FY 2009-10 works out to Rs. 291.85 (30.25+261.60) crore.

The Commission accordingly approves total carrying cost of Rs. 291.85 crore for the approved revenue gap of Rs. 1,185.52 crore for FY 2009-10.

4.15 Return on Equity (ROE)

In the ARR Petition for FY 2011-12, the Board claimed ROE @ 15.5 % (pre-tax) to be grossed up to 22.88% as per CERC Tariff Regulations. The PSERC Tariff Regulations stipulate that CERC Tariff Regulations shall be followed 'as far as possible'. The Commission observes that at present, PSPCL has not been able to show requisite improvement in the critical parameters like employee cost. Thus, the Commission retains the ROE rate @ 14% and works out the ROE at Rs. 366.47 crore on the total equity of Rs. 2,617.61 crore.

Accordingly, the Commission approves Return on Equity of Rs. 366.47 crore for FY 2010-11.

4.16 Transmission Charges Payable to PSTCL

The Commission in its Order dated May 9, 2011 passed on the ARR of PSTCL for FY 2011-12, has determined Rs. 491.45 crore as the transmission charges payable to PSTCL by PSPCL. Accordingly, this is being included in the ARR of PSPCL for FY 2011-12.

PSPCL is directed to ensure timely payment of transmission charges (including SLDC charges) to PSTCL.

4.17 Charges Payable to GoP on account of Power from Ranjit Sagar Dam (RSD)

PSPCL has claimed Rs. 17.71 crore on account of charges payable to GoP for its share of power from Ranjit Sagar Dam (RSD). In support of its claim, PSPCL has submitted the copy of Minutes of the 46th Meeting of the Standing Committee of the Ranjit Sagar Dam Construction Board (RSDCB) held on February 19, 2009 and the resolution of PSPCL dated August 10, 2010, whereby PSPCL would pay 3% of the revenue received by it from sale of power produced from RSD, as maintenance charges for RSD as well as charges for remaining work, which would be deposited in the Punjab Treasury. The Commission allows this amount to be included in the ARR of PSPCL for FY 2011-12.

4.18 Non-Tariff Income

In the ARR Petition for FY 2011-12, PSPCL has projected non-tariff income of Rs. 502.77 crore. However, in the additional information supplied by PSPCL vide letter dated February 2, 2011, it has projected non-tariff income of Rs. 519.98 crore for FY 2011-12, which is inclusive of Rs. 2.68 crore on account of wheeling charges. Subsequently, the wheeling charges were revised by PSPCL to Rs. 37.58 crore. Thus, the non-tariff income is revised to Rs. 554.88 crore. In addition PSPCL has claimed meter rentals and service charges amounting to Rs. 24.23 crore in respect of AP consumers, Scheduled caste Domestic Supply consumers and Non-Scheduled Caste BPL consumers for FY 2010-11. Considering the same level of revenue from meter rentals and service charges for FY 2011-12, the total non-tariff income works out to Rs. 579.11 crore.

The Commission, therefore, approves Rs. 579.11 crore as the Non-Tariff Income of PSPCL for FY 2011-12.

4.19 Revenue from Existing Tariff

The revenue from existing tariff projected by PSPCL for FY 2011-12 is Rs. 14,214.81 crore, including revenue from AP consumption. PSPCL has not projected PLEC, MMC and other charges for FY 2011-12 separately in its ARR petition. The Commission in para 3.20 of this Order has calculated PLEC and MMC of Rs. 439.21 crore for FY 2010-11. The Commission decides to allow the same amount in FY 2011-12 also. The expected revenue from the existing tariff on the basis of sales approved by the Commission works out to Rs. 14,682.03 crore as shown in Table 4-29 below:

Table 4-29: Revenue from Existing Tariff - FY 2011-12

Sr. No.	Category of consumers	Now approved by the Commission		
		Energy Sale (MU)	Tariff Rate (Paise/unit)	Revenue (Rs. crore)
1	2	3	4	5
1	Domestic			
a)	0-100 Units	4943	311	1537.27
b)	101-300 Units	2583	452	1167.52
c)	Above 300 Units	1328	478	634.78
	Sub-Total	8854		3339.57

Sr. No.	Category of consumers	Now approved by the Commission		
		Energy Sale (MU)	Tariff Rate (Paise/unit)	Revenue (Rs. crore)
1	2	3	4	5
2	Non-Residential Supply	2623	519	1361.34
3	Public Lighting	137	510	69.87
4	Industrial Consumers			
a)	Small Power	835	414	345.69
b)	Medium Supply	1755	458	803.79
c)	Large Supply	9607	458	4400.01
	Sub-Total	12197		5549.49
5	Bulk Supply & Grid Supply			
a)	HT	500	461	230.50
b)	LT	39	489	19.07
	Sub-Total	539		249.57
6	Railway Traction	181	541	97.92
7	Common Pool	302		100.00
8	Outside State	0		5.30
9	Total (1 to 8)	24833		10773.06
10	AP	10843	320	3469.76
11	Add: PLEC,MMC Etc.			439.21
	GRAND TOTAL	35676		14682.03

4.20 Revenue Requirement

A summary of the Annual Revenue Requirement of PSPCL for FY 2011-12 as discussed in the preceding paragraphs is given in Table 4-30 below:

Table 4-30: Revenue Requirement - FY 2011-12

Sr. No.	Item of Expense	(Rs. crore)	
		Proposed by PSPCL	Approved by the Commission
1	2	3	4
1	Cost of fuel	4066.43	3588.17
2	Cost of power purchase	6349.74	5751.26
3	Employee cost	3607.75	2916.98
4	R&M expenses	414.74	376.22
5	A&G expenses	87.95	87.95
6	Depreciation	891.92	841.04
7	Interest charges	2203.27	1066.86
8	Return on Equity	598.86	366.47
9	Transmission charges payable to PSTCL	712.03	491.45

Sr. No.	Item of Expense	Proposed by PSPCL	Approved by the Commission
1	2	3	4
10	Charges payable to GoP on Power from RSD	17.71	17.71
11	Total Revenue Requirement	18950.40	15504.11
12	Less Non Tariff Income	502.77	579.11
13	Net Revenue Requirement	18447.62	14925.00
14	Less Revenue from Existing Tariff	14214.81	14682.03
15	Gap for FY 2011-12	4232.81	242.97
16	Add Consolidated Gap upto FY 2010-11	5423.72	2116.69
17	Consolidated Gap up to FY 2011-12	9656.53	2359.66
18	Add Carrying Cost of Revenue Gaps	-	291.85
19	Total Gap for FY 2011-12	9656.53	2651.51
20	Energy Sales(MU)	36165	35676

The cumulative gap for FY 2011-12 is determined at Rs. 2,651.51 crore. The Annual Revenue Requirement for FY 2011-12 is assessed at Rs. 15,504.11 crore with energy sales of 35,676 MU. The average cost of supply with this revenue requirement comes to 434.584 paise per unit (Rs. 15,504.11 crore/35,676 MU). The combined average cost of supply works out to 502.09 paise per unit (Rs. 17,912.65 crore/35,676 MU) after taking into account the ARR of Rs. 15,504.11 crore for FY 2011-12, approved consolidated gap of Rs. 2,116.69 crore for FY 2010-11 and carrying cost of Rs. 291.85 crore for the approved revenue gaps.

Chapter 5

Tariff Related Issues

Certain Tariff related issues were raised by several Consumers/ Consumer Organizations during the course of public hearings held by the Commission in pursuance of the ARR and tariff determination for FY 2011-12. The Commission has examined all these issues taking into account the public objections and responses of PSPCL. All these issues are discussed below:

5.1 Voltage Surcharges

5.1.1 The Commission notes that as per existing General Conditions of Tariff and Schedules of Tariff, voltage surcharges are leviable as under:

- (i) LT surcharge @ 20% is leviable on the consumption charges including demand charges, if any, or monthly minimum charges in the case of all Large Supply consumers of general category where supply is given at 400 volts against a base supply voltage of 11 kV.
- (ii) All Large Supply (including Arc furnace) consumers with Contract Demand exceeding 2500 kVA and upto 4000 kVA catered at 11 kV are liable to pay a surcharge @ 7%** on the consumption charges including demand charges, if any, or monthly minimum charges as compensation for transformation losses and incremental line losses.
- (iii) All Large Supply (including Arc furnace) consumers having contract demand exceeding 4000 kVA catered at 11 kV are levied a surcharge @ 10%** on the consumption charges including demand charges, if any, or monthly minimum charges.

(**substituted vide Order dated 19.1.2011. Prior to substitution, the surcharge rates were 10% and 17.5% respectively.)

5.1.2 In the Tariff Order for FY 2009-10 the Commission decided that the Board would henceforth release all new connections or additional load/demand only at the specified voltage. Furthermore, the Board would take steps to ensure that existing consumers getting supply at voltages lower than the specified voltage will be provided supply at the specified voltage within a period of 18

months. In case there are constraints in releasing a new connection and/or additional load/demand at the prescribed voltage or in converting the supply voltage of an existing consumer, the supply may be given / continued to be given at a lower voltage on the condition of payment of surcharge specified in the General Conditions of Tariff.

5.1.3 The Commission observes that voltages at which supply is to be catered to any consumer have been specified in the Conditions of Supply of PSPCL and these vary from different categories and are linked to quantum of Contract Demand of the consumer. Notes below clause 5.2 of the Conditions of Supply read as:

Notes :

- (i) Supply to an applicant/consumer will invariably be released at the voltage linked to Contract Demand as indicated above.
- (ii) In case there is any constraint in releasing a connection at the specified voltage, the Board may cater the supply at a lower voltage on payment of surcharge as specified in the General Conditions of Tariff.
- (iii) (a) All existing LS consumers availing supply at a voltage less than that specified above, may convert their system so as to receive the supply at the specified voltage. Till conversion to the specified supply voltage, or in case there is any constraint in such conversion, a consumer will continue to be levied surcharge(s) related to supply voltage as specified in the General Conditions of Tariff.
(b) Existing LS consumers availing supply at 66 kV but required to convert their system so as to receive supply at 132/ 220 kV will not be levied any surcharge related to supply voltage, till such consumers request for enhancement of their Contract Demand.
(c) Existing DS, NRS & BS consumers may get their Contract Demand sanctioned upto their existing sanctioned connected load converted into kVA (by assuming 0.90 power factor) or the existing sanctioned Contract Demand (transformer capacity) as on 31.3.2010, whichever is higher. All such consumers catered at a voltage lower than specified above, will be liable to pay surcharge only in case of any enhancement in Contract Demand.

(d) The Board may effect supply at a lower voltage on payment of surcharge as specified/may be specified in the General Conditions of Tariff if specified voltage for supply to an existing consumer for release of additional load/demand(total load/demand) is HT/EHT but there is a constraint in effecting supply at these voltages.

5.1.4 The Commission had observed that even though voltage(s) had been specified for catering higher loads in case of DS/NRS & BS categories but the surcharge(s) had not been specified where supply is given at a lower voltage. Similarly surcharge in case of LS consumers required to be released supply at 132 kV/220 kV but due to certain constraints supply is given at 33/66 kV had not been specified. The Commission had therefore invited comments/objections of the public, State Govt. and the erstwhile PSEB on the proposal contained in the staff paper vide public notice published in the various News Papers of 5.3.2010. In the staff paper, it was proposed that the consumers who are released connections/additional load/demand at a voltage lower than the specified voltage, would be liable to pay surcharge as under:-

- i. DS/NRS consumers at 400 volts against specified voltage of 11 kV - 20% on consumption charges including MMC.
- ii. DS/NRS/BS consumers at 11 kV instead of specified voltage of 33/66 kV - 17.5% on consumption charges including MMC.
- iii. BS/DS/NRS/LS consumers at 33/66 kV instead of specified voltage of 132/220 kV - 5% on consumption charges including MMC.

It was also proposed that existing surcharges referred in para 5.1.1 would continue to be levied and different tariff rates for Bulk Supply consumers at LT and HT would also continue.

5.1.5 The industrial consumers/consumers associations have stressed that the voltage surcharge should not be applicable to existing consumers especially those who were released connections/ additional load/demand as per rules prevalent at the time of release and should be applicable to future loads/demand.

5.1.6 The Commission observes that as per analysis carried out, the additional liability for the Distribution Licensee is about 12.7% on account of catering supply at 400 Volts against specified voltage of 11 kV. The Commission therefore decides to re-determine this surcharge and fix it at the rate of 15% by adding a disincentive so that consumers are encouraged to shift to higher voltage i.e. 11 kV.

5.1.7 The Commission observes that there is a need for specifying surcharge rates for DS/NRS & BS consumers who are released load/demand at a lower voltage due to some constraints. Similarly LS consumers required to be supplied at 132/220 kV but catered at 33/66 kV due to some constraints need to be levied some surcharge. **The Commission therefore decides that:**

- i) **DS/NRS/LS consumer catered at 400 volts against specified voltage of 11 kV be levied surcharge at the rate of 15%.**
- ii) **DS/NRS/LS/BS consumers with Contract Demand exceeding 4000 kVA catered at 11 kV against specified voltage of 33/66 kV be levied surcharge at the rate of 10%.**
- iii) **LS consumers with Contract Demand exceeding 2500 kVA and upto 4000 kVA, catered at 11 kV against specified voltage of 33/66 kV be levied surcharge at the rate of 7%.**
- iv) **DS/NRS/BS/LS consumers catered at 33/66 kV against specified voltage of 132/220 kV be levied surcharge at the rate of 5%.**
- v) **All these surcharges will be leviable on the consumption charges including Demand Charges, if any or monthly minimum charges.**
- vi) **The exemptions from levy of surcharge(s) specified in the Conditions of Supply and referred in para 5.1.3 above shall continue.**

Chapter 6

Determination of Tariff

6.1 Annual Revenue Requirement

6.1.1 The Commission has determined the ARR of PSPCL for the FY 2011-12 at Rs. 15,504.11 crore. It has simultaneously undertaken a true up of the FY 2009-10 consequent upon the availability of audited accounts of the erstwhile Board which has resulted in a cumulative revenue gap (deficit) of Rs. 2,162.89 crore. The review of FY 2010-11 indicates a surplus of Rs. 46.20 crore, resulting in a consolidated gap of Rs. 2,116.69 crore at the end of FY 2010-11.

6.1.2 The combined impact of these exercises and the approved carrying cost of gaps indicate a gross revenue requirement of Rs. 17,912.65 (15,504.11 + 2,116.69 + 291.85) crore for the FY 2011-12. After making adjustment on account of non-tariff income and revenue from tariff at the existing level, the revenue gap accepted by the Commission for FY 2011-12 is Rs. 2,651.51 crore.

6.2 Determination of Retail tariff

6.2.1 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 mind the relevant aspects of the National Electricity Policy, National Tariff Policy, the norms adopted by it in earlier Tariff Orders and inputs received from consumers during the process of public hearings.

Income from tariff at existing rates taken into account for working out the percentage increase in tariff required to cover the gap, does not include income from sales to Common Pool consumers, Outside State sales and Peak Load Exemption Charges (PLEC).

6.2.2 To meet this revenue gap of Rs. 2,651.51 crore for the FY 2011-12, an increase of 18.37% is required over the existing tariff including MMC but excluding sales to Common Pool consumers, Outside State sales and PLEC. However, the Commission is of the view that the revenue gap is substantial and passing the same in the tariff for FY 2011-12 would result in a tariff shock to the consumers. Therefore, keeping in view Clause 8.2.2 of the National Tariff Policy notified by Government of India (GoI) as well as in accordance with Regulation 11 of PSERC (Terms & Conditions for Determination of Tariff) Regulations, 2005, the Commission decides to create a Regulatory Asset amounting to Rs.1,325.76 crore. The balance gap of Rs. 1,325.75 crore will be passed on to the consumers through tariff increase. This amount of Rs. 1,325.75 crore would require an increase of 9.19% in the existing tariff including MMC, except sales to Common Pool consumers, Outside State sales and PLEC. The combined average cost of supply with this increase works out to 464.93 Paise per unit.

The provisions of the Act, National Tariff Policy and the Commission's own Regulations require that there be a gradual reduction of cross-subsidies. Therefore, with this end in view, the Commission decides to increase the tariff of subsidized categories, i.e. Domestic Supply consumers with consumption upto 100 units and AP consumers by 37 paise/unit. Further, the tariff increase of subsidising categories i.e. Public Lighting, NRS, Bulk Supply (LT) and Railway Traction going above 37 paise/unit (by applying the average increase of 9.19%) has been capped at 37 paise/unit/. Tariff for remaining consumer categories and MMC will increase by 7.99% and 9.19% respectively. There will be no change in PLEC rates. The existing and revised tariffs are indicated in Table 6-1.

Table 6-1: Existing and Revised Tariff - FY 2011-12

Sr. No.	Category of Consumers	Existing Tariff		Revised Tariff approved by the Commission	
		Energy Rate (paise/kWh)	MMC (Rs.)	Energy Rate (paise/kWh)	MMC (Rs.)
A) PERMANENT SUPPLY					
1	Domestic				
a)	Upto 100 units	311	Loads upto 100 kW: Rs. 38/kW. Loads exceeding 100 kW: Rs. 34/kVA	348	Loads upto 100 kW: Rs. 41/kW. Loads exceeding 100 kW: Rs. 37/kVA
b)	101 to 300 units	452		488	
c)	Above 300 units	478		515	
2	Non-Residential Supply	519	Loads upto 100 kW: Rs. 136/kW. Loads exceeding 100 kW: Rs. 122/kVA	556	Loads upto 100 kW: Rs. 148/kW. Loads exceeding 100 kW: Rs. 133/kVA
3	Public Lighting	510	As per 8 hrs/Day	547	As per 8 hrs/Day
4	Agricultural Pumpsets	i) Without Govt. subsidy: 320 Ps/kWh or Rs. 273 /BHP/Month	Not Applicable	i) Without Govt. subsidy: 357 Ps/kWh or Rs. 299 /BHP/Month	Not Applicable
		* ii) With Govt. subsidy: 59 Ps/kWh or Rs. 50 /BHP/Month		ii) With Govt. subsidy: Nil	
5	AP High - Technology	320	Not Applicable	357	Not Applicable
6	Industrial Consumers				
a)	Small Power	414	112/kW	447	122/kW
b)	Medium Supply	458	148/kW	495	162/kW
c)	Large Supply				
i)	General Industry	458	133/kVA	495	145/kVA
ii)	PIU	458	351/kVA	495	383/kVA
iii)	Arc Furnace	458	351/kVA	495	383/kVA
7	Bulk Supply (including MES)				
a)	HT	461	219/kVA	498	239/kVA
b)	LT	489		526	
8	Railway Traction	541	224/kVA	578	245/kVA

* Tariff as approved in Tariff Order for FY 2010-11. However, this became Nil w.e.f. November 03, 2010.

Sr. No.	Category of Consumers	Existing Tariff		Revised Tariff approved by the Commission	
		Energy Rate (paise/kWh)	MMC (Rs.)	Energy Rate (paise/kWh)	MMC (Rs.)
B) SEASONAL INDUSTRY: COTTON GINNING, PRESSING AND BAILING PLANT, RICE SHELLERS /HULLER MILLS, KINNOW GRADING AND WAXING CENTRES, RICE BRAN STABILISATION UNITS (WITHOUT T.G.SETS) (SP, MS, LS)					
a)	During Season (From 1 st September to 31 st May next year)				
	SP	414	410/kW	447	448/kW
	MS	458	410/kW	495	448/kW
	LS	458	369/kVA	495	403/kVA
b)	Off Season				
	SP	491	NA	530	NA
	MS	525	NA	567	NA
	LS	525	NA	567	NA
C) ICE FACTORY & ICE CANDIES AND COLD STORAGE					
a)	April to July				
	SP	414	558/kW	447	609/kW
	MS	458	558/kW	495	609/kW
	LS	458	503/kVA	495	549/kVA
b)	August to March Next Year				
	SP	414	112/kW	447	122/kW
	MS	458	112/kW	495	122/kW
	LS	458	100/kVA	495	109/kVA
D) GOLDEN TEMPLE, AMRITSAR AND DURGIANA TEMPLE, AMRITSAR					
a)	First 2000 units	Free	NA	Free	NA
b)	Beyond 2000 units	369	NA	406	NA
E) TEMPORARY SUPPLY					
i)	Domestic	815	Rs. 689 or Rs. 137/kW, whichever is higher	880	Rs. 752 or Rs. 150/kW, whichever is higher
ii)	NRS	815	Rs. 1378 or Rs. 345/kW, whichever is higher	880	Rs. 1505 or Rs. 377/kW, whichever is higher
iii)	Industrial (SP,MS & LS)	As per Tariff approved at A(6) above for permanent supply + 100%	Rs. 552/kW of sanctioned load for SP and MS and Rs. 496/kVA for LS	As per Tariff approved at A(6) above for permanent supply + 100%	Rs. 603/kW of sanctioned load for SP and MS and Rs.542/kVA for LS
iv)	Wheat Thresher	As per Tariff approved at A(6) above for permanent supply + 100%	Rs. 552/kW of sanctioned load for SP and MS and Rs. 496/kVA for LS	As per Tariff approved at A(6) above for permanent supply +100%	Rs. 603/kW of sanctioned load for SP and MS and Rs.542/kVA for LS
v)	Fairs, Exhibition & mela congregations	Bulk Supply tariff as at A(7) + 50%	Rs. 5517 per service	Bulk Supply tariff as at A(7) + 50%	Rs. 6024 per service

Sr. No.	Category of Consumers	Existing Tariff		Revised Tariff approved by the Commission	
		Energy Rate (paise/kWh)	MMC (Rs.)	Energy Rate (paise/kWh)	MMC (Rs.)
vi)	Touring Cinemas				
a)	Lights and Fans	815	For (a) and (b), Rs. 1378 or Rs. 345/kW of sanctioned load, whichever is higher	880	For (a) and (b), Rs. 1505 or Rs. 377/kW of sanctioned load, whichever is higher
b)	Motive Load	Rate for Industrial permanent supply as at A(6)+100%		Rate for Industrial permanent supply as at A(6)+100%	

Notes:

- (i) SC and non SC BPL, Domestic consumers with connected load upto 1000 watts will be given 100 units of free power per month in view of Govt subsidy;
- (ii) AP consumers and consumers mentioned in (i) above will not be charged service charges and meter rentals in view of Govt subsidy;
- (iii) All other charges including rentals and deposits as per Schedule of General Charges, Supply Code and General Conditions of Tariff & Schedules of Tariff approved by the Commission will continue to be charged at the existing rates till these are reviewed by the Commission;
- (iv) Operating conditions of MMC will continue to be as specified in the relevant Schedule of Tariff. Rates of MMC in Rs./kVA shall be charged on the Contract Demand of the consumers. However, 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. Rs.37 per KVA.
- (v) Consumers obtaining one point supply for providing electricity to ultimate users in the Co-operative Group Housing Societies / Residential Colonies / Commercial Complexes/Shopping Malls/Industrial Estates etc. will be eligible for rebate as specified in the Conditions of Supply approved by the Commission, in addition to other voltage rebates as may be applicable;

6.2.3 Amortisation of Regulatory Asset

The Regulatory Asset amounting to Rs. 1,325.76 crore shall be amortised in the subsequent three years (FY 2012-13, FY 2013-14 and FY 2014-15) as per the provisions of PSERC (Terms and Conditions for Determination of Tariff) Regulations, 2005.

6.3 Effect of revised tariff on cross subsidy

- 6.3.1 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 total quantum of cross subsidy generated and utilised in the system as worked out for energy sales for FY 2011-12 at existing tariff is depicted in Table 6-2.

**Table 6-2: Aggregate quantum of cross subsidy for Energy Sales
of FY 2011-12 at Existing Tariff
(Combined average cost of supply = 427.77 paise/unit)**

Sr. No.	Consumer Category	Energy Sales (MU)	Existing Tariff (Paise/unit)	Revenue with Existing Tariff (Rs. crore)	PLEC + MMC etc. (Rs. crore)	Non tariff Income (Rs. crore)	Total Revenue (Rs. crore) (5+6+7)	Expected Revenue with Average Cost (Rs. crore)	Cross Subsidy generated (+)/ Utilised(-) (8-9)
1	2	3	4	5	6	7	8	9	10
1	Domestic								
a)	Upto 100 units	4943	311	1537.27	59.33	80.24	1676.83	2114.47	-437.64
b)	101-300 units	2583	452	1167.52	31.00	41.93	1240.45	1104.93	135.52
c)	Above 300 units	1328	478	634.78	15.94	21.56	672.28	568.08	104.20
	Total	8854		3339.57	106.27	143.73	3589.56	3787.48	
2	NRS	2623	519	1361.34	31.48	42.58	1435.39	1122.04	313.35
3	Public Lighting	137	510	69.87	1.64	2.22	73.73	58.6	15.12
4	Industrial								
a)	Small Power	835	414	345.69	10.02	13.55	369.26	357.19	12.06
b)	Medium Supply	1755	458	803.79	21.06	28.49	853.33	750.74	102.58
c)	Large Supply	9607	458	4400.01	260.09	155.95	4816.05	4109.59	706.46
	Total	12197		5549.49	291.17	197.98	6038.64	5217.52	
5	Bulk Supply								
a)	HT	500	461	230.50	6.00	8.12	244.63	213.89	30.74
b)	LT	39	489	19.07	0.47	0.63	20.17	16.68	3.49
	Total	539		249.57	6.48	8.75	264.8	230.57	
6	Railway Traction	181	541	97.92	2.17	2.94	103.04	77.43	25.61
7	Common Pool	302		100.00		4.90	104.90	129.19	-24.29
8	Outside State			5.30			5.30		5.3
9	AP	10843	320	3469.76		176.01	3645.78	4638.31	-992.54
10	Total	35676		14242.82	439.21	579.11	15261.14	15261.15	1449.15 -1449.17

6.3.2 The position of cross subsidy levels in the system for energy sales of FY 2011-12 with revised tariffs (as approved in para 6.2) is indicated in Table 6-3.

6.3.3 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 sales. Non-tariff income has been apportioned in the ratio of energy sale to different categories, except Outside State sales while PLEC has been loaded to the LS category only.

**Table 6-3: Aggregate quantum of cross subsidy for Energy Sales
of FY 2011-12 at Revised Tariff
(Combined average cost of supply = 464.93 paise/unit)**

Sr. No.	Consumer Category	Approved Energy Sales (MU)	Proposed Tariff (Paise/unit)	Revenue with Proposed Tariff (Rs. crore)	PLEC + MMC etc. (Rs. crore)	Non Tariff Income (Rs. crore)	Total Revenue (Rs. crore) (5+6+7)	Expected Revenue with Average Cost (Rs. crore)	Cross Subsidy generated (+)/ Utilised(-) (8-9)
1	2	3	4	5	6	7	8	9	10
1	Domestic								
a)	Upto 100 units	4943	348	1720.16	64.78	80.24	1865.18	2298.15	-432.97
b)	101-300 units	2583	488	1260.5	33.85	41.93	1336.28	1200.91	135.37
c)	Above 300 units	1328	515	683.92	17.40	21.56	722.88	617.43	105.45
	Total	8854		3664.58	116.03	143.73	3924.34	4116.49	
2	NRS	2623	556	1458.39	34.37	42.58	1535.34	1219.51	315.83
3	Public Lighting	137	547	74.94	1.80	2.22	78.96	63.7	15.26
4	Industrial								
a)	Small Power	835	447	373.25	10.94	13.55	397.74	388.22	9.52
b)	Medium Supply	1755	495	868.73	23.00	28.49	920.22	815.95	104.27
c)	Large Supply	9607	495	4755.47	270.69	155.95	5182.11	4466.58	715.53
	Total	12197		5997.45	304.63	197.99	6500.07	5670.75	
5	Bulk Supply								
a)	HT	500	498	249.00	6.55	8.12	263.67	232.47	31.2
b)	LT	39	526	20.51	0.51	0.63	21.65	18.13	3.52
	Total	539		269.51	7.06	8.75	285.32	250.6	
6	Railway Traction	181	578	104.62	2.37	2.94	109.93	84.15	25.78
7	Common Pool	302		100.00		4.90	104.9	140.41	-35.51
8	Outside State			5.30			5.3		5.3
9	AP	10843	357	3870.95		176.01	4046.96	5041.24	-994.28
10	Total	35676		15545.74	466.26	579.12	16591.12	16586.85	1461.73 -1457.46

The cross subsidy likely to be generated at the revised level of tariff comes to Rs.1,461.73 crore against which Rs.1,457.46 crore cross subsidy is required leaving a surplus of Rs. 4.27 crore.

6.3.4 Taking into account the quantum of cross subsidy in each consumer category determined for sales of FY 2011-12 as per existing tariffs brought out in the Table 6-2 and as per revised tariffs brought out in Table 6-3, the gross quantum of cross subsidy from each category for the FY 2011-12 at existing tariff and revised tariff is given in Table 6-4.

Table 6-4: Aggregate quantum of Cross Subsidy – comparison
Average Cost of supply 427.77 paise/unit (Existing Tariff)
Average cost of supply 464.93 paise/unit (Revised Tariff)

Sr. No.	Consumer Category	Quantum of Cross Subsidy in absolute terms			
		Existing Tariff		Revised Tariff	
		Energy Sales (MU)	Cross Subsidy (Rs. crore)	Energy Sales (MU)	Cross Subsidy (Rs. crore)
1	2	3	4	5	6
1	Domestic				
a)	Upto 100 units	4943	-437.64	4943	-432.97
b)	101-300 units	2583	135.52	2583	135.37
c)	Above 300 units	1328	104.20	1328	105.45
	Total	8854		8854	
2	NRS	2623	313.35	2623	315.83
3	Public Lighting	137	15.12	137	15.26
4	Industrial				
a)	Small Power	835	12.06	835	9.52
b)	Medium Supply	1755	102.58	1755	104.27
c)	Large Supply	9607	706.46	9607	715.53
	Total	12197		12197	
5	Bulk Supply				
a)	HT	500	30.74	500	31.20
b)	LT	39	3.49	39	3.52
	Total	539		539	
6	Railway Traction	181	25.61	181	25.78
7	Common Pool	302	-24.29	302	-35.51
8	Outside State		5.3		5.30
9	AP	10843	-992.54	10843	-994.28
10	Total	35676	1449.15	35676	1461.73
			-1449.17		-1457.46

6.3.5 Further, the cross subsidy levels based on the energy sales determined for FY 2011-12 at existing and revised tariff in %age terms are brought out in Table 6-5.

Table 6-5: Cross Subsidy Levels

Sr. No.	Consumer Category	Existing Tariff				Revised Tariff				
		Combined Average Cost of Supply 427.77 paise/unit				Combined Average Cost of Supply 464.93 paise/unit				
		Energy Sales (MU)	Total Revenue (Rs. crore)	Realisation per unit (Paise per unit)	Cross Subsidy Levels (%)	Energy Sales (MU)	Total Revenue (Rs. crore)	Realisation per unit (Paise per unit)	Cross Subsidy Levels (%)	
1	2	3	4	5	6	7	8	9	10	
1	Domestic									
a)	Upto 100 units	4943	1676.83	339.23	-20.70%	4943	1865.18	377.34	-18.84%	
b)	101-300 units	2583	1240.45	480.24	12.27%	2583	1336.28	517.34	11.27%	
c)	Above 300 units	1328	672.28	506.23	18.34%	1328	722.88	544.34	17.08%	
	Total	8854	3589.56	405.43	-5.22%	8854	3924.34	443.24	-4.67%	
2	NRS	2623	1435.39	547.23	27.93%	2623	1535.34	585.34	25.90%	
3	Public Lighting	137	73.73	538.18	25.81%	137	78.96	576.35	23.96%	
4	Industrial									
a)	Small Power	835	369.26	442.23	3.38%	835	397.74	476.34	2.45%	
b)	Medium Supply	1755	853.33	486.23	13.67%	1755	920.22	524.34	12.78%	
c)	Large Supply	9607	4816.05	501.31	17.19%	9607	5182.11	539.41	16.02%	
	Total	12197	6038.64	495.09		12197	6500.07	532.92		
5	Bulk Supply									
a)	HT	500	244.63	489.26	14.37%	500	263.67	527.34	13.42%	
b)	LT	39	20.17	517.18	20.90%	39	21.65	555.13	19.40%	
	Total	539	264.80	491.28		539	285.32	529.35		
6	Railway Traction	181	103.04	569.28	33.08%	181	109.93	607.35	30.63%	
7	Common Pool	302	104.90	347.35		302	104.90	347.35		
8	Outside State		5.30							
9	AP	10843	3645.78	336.23	-21.40%	10843	4046.96	373.23	-19.72%	
10	Total	35676	15261.13	427.77		35676	16591.12	465.05		

As per Regulations framed by the Commission, tariff is to be determined in such a way that it progressively reflects combined average unit cost of supply. The Commission observes that, in consonance with the PSERC Tariff Regulations, there is a reduction in the cross subsidy levels of both the subsidised and subsidising categories as compared to those on existing tariff.

6.4 GoP Subsidies

6.4.1 After determining the ARR and tariff for the year 2011-12, the Commission in its D.O.letter No 576-77 dated 21.04.2011 (Annexure-IX), 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 continued its present policy of subsidizing AP consumers, SC DS consumers and Non-SC BPL DS consumers as under:

- **AP Consumption:** In its ARR for FY 2011-12, PSPCL has projected AP consumption of 12253 MU against which the Commission has determined the same to be 10843 MU in para 4.1.3 of this Tariff Order. The revenue from AP consumption of 10843 MU @ 357 paise/unit (which translates into Rs. 299/ BHP/Month) works out to Rs. 3870.95 crore.
- **Meter Rentals and Service Charges:** In addition, subsidy of Rs. 9.00 crore on account of meter rentals and service charges (assumed at previous year level) in respect of AP consumers is also payable by the GoP for FY 2011-12. Accordingly, total AP subsidy of Rs. 3879.95 (3870.95 + 9.00) crore will be payable by GoP for FY 2011-12.
- **Scheduled Castes (SC) Domestic Supply (DS) consumers:** For allowing subsidy to this category of consumers, GoP in its decision dated January 22, 2010, has fixed the upper ceiling of consumption of 100 units per month with connected load upto 1000 watts. PSPCL in the ARR of FY 2011-12 has claimed subsidy of Rs. 328.70 crore inclusive of meter rentals and service charges of Rs. 16 crore. The subsidy claimed by the utility has been increased in proportion to the hike in tariff ordered by the Commission in this Tariff Order. Accordingly, the Commission determines subsidy of Rs. 365.90 crore inclusive of meter rentals and service charges of Rs.16 crore for FY 2011-12.
- **Non-SC Below Poverty Line (BPL) DS consumers:** Similarly, for allowing subsidy to this category of consumers, GoP in its decision dated January 22, 2010, has fixed the upper ceiling of consumption of 100 units per month with connected load upto 1000 watts. PSPCL has claimed subsidy of Rs.10.76 crore inclusive of meter rentals and service charges of Rs.0.24 crore on this account for FY 2011-12. The subsidy claimed by the utility has been increased in proportion to the hike in tariff ordered by the Commission in this Tariff Order. Accordingly, the Commission determines subsidy of Rs.12.01 crore inclusive of meter rentals and service charges of Rs. 0.24 crore for the year 2011-12.

Thus, total requirement of subsidy for the year 2011-12 works out to Rs. 4257.86 (3879.95 + 365.90 + 12.01) crore.

6.4.2 For FY 2010-11, the Commission has determined subsidy of Rs. 3,500.16 crore inclusive of interest of Rs.15.60 crore payable for delay in payment of subsidy as discussed in para 3.15 of this Tariff Order. Against this, GoP has already adjusted/paid an amount of Rs. 3,375.55 crore during the financial year. Thus, after adjustment of the amount the balance subsidy payable by GoP works out to Rs. 124.61 (3,500.16 – 3,375.55) crore.

6.4.3 For FY 2009-10, the Commission has trued-up payable subsidy at Rs. 3,132.15 crore against which GoP has paid/adjusted an amount of Rs. 3,144.25 (1,733.60 +1,140.43+270.22) crore which resulted in excess payment of Rs. 12.10 crore as discussed in para 2.18.2 of this Tariff Order.

6.4.4 The Commission has also determined excess payment of subsidy of Rs. 193.55 crore including Rs. 12.10 crore mentioned above upto FY 2009-10 as discussed in para 2.18.2 of this Tariff Order.

On the above basis, subsidy payable by GoP during FY 2011-12 is detailed in Table 6-6.

Table 6-6: Requirement of Subsidy - FY 2011-12

(Rs. crore)

Subsidy payable by the Govt.	AP +Meter rentals and service charges	SC DS + Meter rentals and service charges	Non-SC BPL DS + Meter rentals & service charges	Total
FY 2011-12				
Subsidy payable for AP consumption of 10843 MU @ 357 paise/unit and SC/Non-SC BPL DS consumers	3870.95 (+) 9.00 3879.95	349.90 (+)16.00 365.90	11.77 (+)0.24 12.01	4257.86
Total subsidy payable by the Govt. for FY 2011-12				4257.86
FY 2010-11				
Subsidy payable as determined by the Commission in para 3.15	2852.56 (+)9.00 2861.56	265.00 (+)15.03 280.03	8.92 (+)0.20 9.12	3150.71

Subsidy payable by the Govt.	AP +Meter rentals and service charges	SC DS + Meter rentals and service charges	Non-SC BPL DS + Meter rentals & service charges	Total
Add: Subsidy payable on a/c. of refund due to rollback of tariff				333.85
Add : Interest payable for delay in payment of subsidy during the financial year				15.60
Total subsidy payable for FY 2010-11 as determined in para 3.15				3500.16
Less: Subsidy paid/ adjusted by GoP during 2010-11.	i) Amount paid 2585.71 ii) Adjusted against GoP loans 520.06 iii) Adjusted against ED <u>269.78</u> 3375.55			3375.55
Amount of subsidy short paid for FY 2010-11	124.61			
FY 2009-10				
Amount of subsidy paid in excess for period ending 2009-10 as determined in para 2.18.2 of this Order	193.55			
Total subsidy paid in excess	68.94			68.94
Total subsidy and interest payable by GoP for FY 2011-12	4257.86 less 68.94			4188.92

The Commission vide its letter dated April 21, 2011 (Annexure-IX) has informed GoP that the subsidy is required to be paid to PSPCL in advance monthly installments of Rs. 349.08 crore per month. The GoP in its letter dated May 5, 2011 (Annexure-X) has accorded approval for the grant of subsidy for the current year. Keeping this decision of GoP in view, the Commission has incorporated the same in the tariff structure in Table 6-1.

The Commission, therefore, approves a total subsidy of Rs. 4,188.92 crore payable by GoP to PSPCL for FY 2011-12.

Besides, the Commission has also determined an amount of Rs. 329.01 crore payable by GoP to PSPCL as discussed in para 3.15 of this Tariff Order. In addition, an amount of Rs. 124.64 crore is payable by GoP to PSPCL being the unadjusted interest amount disallowed on diversion of capital funds as discussed in para 4.13.10 of this Tariff Order. Thus, cumulatively, Rs. 453.65 (329.01 + 124.64) crore is payable by GoP to PSPCL during FY 2011-12.

6.5 Tariff for purchase of NRSE Power

As per NRSE Policy–2006, notified by the Govt. and adopted by the Commission in its Order dated 13.12.2007, the rates for purchase of power from such projects covered under this policy shall be as under during the FY 2011-12 :-

Biomass, Urban / Municipal / Industrial liquid / solid waste to energy and Wind power projects	444 Paise/Unit
Mini/Micro Hydel, Bagasse/Biomass based Co-generation	404 Paise/Unit
Solar energy	895 Paise/Unit

However, these tariff rates would not be applicable to the projects covered in the Commission's Order dated 07.07.2010 in Petition No. 26/2010 for determination of generic levelised generation tariff for 'Solar' and Order dated 30.09.2010 in Petition No. 32/2010 in respect of 'other than Solar' power projects. Further, the tariff would also be not applicable to individual projects for which the Commission has determined the generation tariff separately.

6.6 Separate tariff for each Function

6.6.1 In compliance with the directions of the Appellate Tribunal for Electricity (ATE), the Commission, in its previous Tariff Orders has been determining separate tariffs for generation, transmission & distribution by segregating the ARR of the erstwhile Board. Now, the transmission function has already been segregated and entrusted upon PSTCL, one of the successor entities of the erstwhile Board, for which separate Tariff Order for FY 2011-12 has been issued by the Commission. In this Order the Commission is determining separate tariffs for generation and distribution functions which have been entrusted to PSPCL, one of the successor entities of the erstwhile Board. The segregation of the ARR for the FY 2011-12 of PSPCL into generation and distribution functions have been carried out based on the information furnished by PSPCL in its letter dated 30.03.2011 and the audited accounts of FY 2009-10 of the erstwhile Board.

6.6.2 The allocation under each head (generation and distribution) is detailed at Annexure-V and ROE is bifurcated proportionately on the value of fixed assets of each function. In addition, the consolidated gap and carrying cost of

gaps upto FY 2010-11 has been computed in proportion to the revenue requirement (in Table 6-7) of each function.

6.6.3 The segregated ARR on the above basis is given in Table 6-7. The generation function has also been further divided into thermal and hydel taking into account the fact that the Regulations for determining the tariff for these are different.

Table 6-7: Segregation of ARR - FY 2011-12

(Rs. crore)

Sr. No.	Item of expense	Generation			Distribution	Total
		Hydel	Thermal	Total		
1	2	3	4	5	6	7
1	Cost of fuel	0.00	3588.17	3588.17		3588.17
2	Cost of power purchase	0.00	0.00	0.00	5751.26	5751.26
3	Employee cost	150.81	422.09	572.90	2344.08	2916.98
4	R&M expenses	89.87	176.81	266.68	109.54	376.22
5	A&G expenses	5.21	6.77	11.98	75.97	87.95
6	Depreciation	165.77	271.91	437.68	403.36	841.04
7	Interest charges	440.08	258.39	698.47	368.39	1066.86
8	Return on Equity	120.56	114.55	235.11	131.36	366.47
9	Transmission charges payable to PSTCL				491.45	491.45
10	Charges payable to GoP on Power from RSD	17.71		17.71		17.71
11	Total revenue requirement	990.01	4838.69	5828.70	9675.41	15504.11
12	Add: Consolidated Gap and carrying cost of gap ending 2010-11	153.80	751.68	905.48	1503.06	2408.54
13	Gross revenue requirement (9+10)	1143.81	5590.37	6734.18	11178.47	17912.65

6.7 Generation tariff

6.7.1 The 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 from time to time. CERC by its notification dated 19th January, 2009 issued the Tariff Regulations for generation & transmission projects for the period 2009-14 by repealing earlier Tariff Regulations, 2004.

6.7.2 As per CERC Regulations, generation tariff comprises of:

(i) Annual Fixed Charges (AFC) which include interest, depreciation, return on equity, O&M expenses, interest on working capital and cost of secondary fuel and;

(ii) Energy (variable) charges for recovery of primary fuel cost.

These charges are recoverable on the basis of norms for thermal plants and hydel plants and are specific for each power plant.

6.7.3 In the case of thermal plants, full AFC is payable on achievement of normative plant availability of 85%, whereas in the case of hydel stations, full AFC is payable on achievement of plant availability of 90%.

6.7.4 The Commission has assessed plant wise AFC on the basis of data provided by PSPCL as reproduced at Annexure-VI whereas proportion of generation cost under each head is given in Annexure-VII. Accordingly, the total revenue requirement for each plant is computed and indicated in Annexure-VIII. The plant wise AFC approved for FY 2011-12 is given in Table 6-8.

Table 6-8: Annual Fixed Charges – Generation – FY 2011-12

Sr. No.	Plant	Annual Capacity Charges (Rs. crore)	Net Generation (MU)	Fixed Charges (paise/unit)
1	2	3	4	5
A	Thermal Plants	2069.29		
1	GGSSTP	841.21	9112	92
2	GNDTP	364.09	2075	175
3	GHTP	863.99	6941	124
B	Hydel Plants	1143.89		
1	RSD	760.74	1346	565
2	Mukerian	87.77	1119	78
3	UBDC	47.76	365	131
4	Shanan	23.05	524	44
5	Anandpur Sahib	51.81	653	79
6	Micro Hydel	2.11	9.93	212
7	Bhakhra Left Bank Bhakhra Right Bank	62.75		*
8	Beas & extn.	107.90		*

*The AFC for hydel plants at Sr. No. (B) 7 and (B) 8 are determined by BBMB.

Accordingly, the total AFC recoverable in the case of thermal and hydel plants are:

- i) Thermal - Rs.2,069.29 crore
- ii) Hydel - Rs.1,143.89 crore

6.7.5 The AFC for both thermal and hydel plants will be payable on achievement of target availability as discussed in para 6.7.3.

6.7.6 Variable (energy) charges for thermal plants

The variable (energy) charges for a thermal plant are the primary fuel cost to be paid to the generators and are computed as cost per unit of ex-bus energy (energy sent out). As per approved ARR for FY 2011-12, the total fuel cost, excluding the cost of secondary fuel oil, for all the three thermal plants (including GHTP Stage - II) is Rs.3,521.05 crore. These costs have been worked out plant wise and the variable charges per unit of energy for each plant are given in Table 6-9.

Table 6-9: Variable (energy) charges – FY 2011-12

Sr. No.	Particulars	GNDTP	GGSSSTP	GHTP
1	2	3	4	5
1	Primary Fuel (Coal) Cost (Rs. crore)*	467.85	1740.69	1312.51
2	Net Generation (MU)	2075	9112	6941
3	Variable Charge per unit (Paise/kWh)	225	191	189

* The plant wise fuel cost has been taken as approved by the Commission in Chapter 4 instead of as apportioned in Annexure – VIII.

6.8 Total charges for generating plants

The total charges (fixed and variable) for generating plants as determined by the Commission are given in Table 6-10.

Table 6-10: Total energy charges – FY 2011-12

Sr. No.	Plant	Fixed Charges (paise/unit)	Variable Charges (paise/unit)	Total Charges (paise/unit)
1	2	3	4	5 = 3 + 4
A	Thermal Plants			
1	GGSSSTP	92	191	283
2	GNDTP	175	225	400
3	GHTP	124	189	313

Sr. No.	Plant	Fixed Charges (paise/unit)	Variable Charges (paise/unit)	Total Charges (paise/unit)
1	2	3	4	5 = 3 + 4
B	Hydel Plants			
1	RSD	565	-	565
2	Mukerian	78	-	78
3	UBDC	131	-	131
4	Shanan	44	-	44
5	Anandpur Sahib	79	-	79
6	Micro Hydel	212	-	212

6.9 Distribution / Wheeling

The revenue requirement for distribution for FY 2011-12 as per Table 6.7 is Rs. 4,935.76 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. The total contracted capacity of cogeneration plants and plants generating electricity from renewable sources is 92.50 MW, as submitted by PSPCL during data validation process. Thus, the total distribution capacity works out to 8082.68 MW (7990.18 + 92.50). **Accordingly, the Commission determines wheeling charges as Rs. 5,08,888 /MW/Month.**

6.10 Open Access Charges

6.10.1 As per the Open Access Regulations notified by the Commission, the Open Access charges for the FY 2011-12 are computed in Table 6-11.

Table 6-11: Open Access Charges – FY 2011-12

Sr. No.	Open Access Charges	
1	Wheeling Charges	Rs. 5,08,888/MW/Month
2	Wheeling Charges payable by long term open access costumers	Rs. 1,69,629/MW/Month

Sr. No.	Open Access Charges	
3	Wheeling Charges for wheeling of power from NRSE Projects	@ of 2% of energy injected to State grid irrespective of distance
4	T&D Losses	
5	(i) For Voltages at 66 kV and above @ 30% of normative T&D Losses	5.70%
6	(i) For Voltages below 66 kV @ 50% of normative T&D Losses	9.50%
7	Other charges such as surcharge, additional surcharge, operation charges, UI charges, reactive energy charges, shall be levied as per the Open Access Regulations/Tariff Regulations notified by the Commission	

6.10.2 The energy requirement at the distribution periphery as per Table 4-5 of this Tariff Order for FY 2011-12 is 42,580 MU. On this basis, the wheeling charges for use of the distribution network in paise per unit terms is determined as 116 Paise per unit. As per the Open Access Regulations of the Commission, the wheeling charges for short term Open Access will be 20% of the full wheeling charges. Thus, wheeling charges for Short Term Open Access customers are determined as 23.2 Paise per unit. This will be in addition to Transmission Charges.

6.11 Issues Related to Open Access

PSPCL has in its ARR Petition for FY 2011-12 has raised its concern on the impact of Open Access on financial health of PSPCL as well as affecting its measures on Demand Side Management. PSPCL has submitted that appropriate safeguards against effects of actual implementation of provisions of Open Access Regulations adversely affecting the utility need to be looked into otherwise this will affect the viability of the newly created entity.

The Commission states that it has put revised draft on Open Access Regulations, 2011 on public notice and has already invited comments and suggestions from the public and other stakeholders on the same. PSPCL is advised to submit its suggestions and concerns on the draft Regulations.

6.12 Cost of Supply and Cross subsidy

The Appellate Tribunal for Electricity while delivering its judgement on February 25, 2011, in Appeal No. 5/2008 has directed the Commission to determine the category-wise Cost of Supply and setting the limit of

consumption for subsidised consumers for which support through cross subsidy may be provided. PSPCL, in the ARR Petition for FY 2011-12, has submitted that it has engaged an agency (TERI) on September 23, 2010 to conduct cost of supply study. **The Commission directs PSPCL to expedite the study and submit the findings of the study to the Commission at the earliest.** Thereafter, the Commission will consider and decide the issue.

6.13 Fuel Cost Adjustment (FCA)

PSPCL has submitted Petition no. 15 of 2011 for fuel cost adjustment for the 3rd quarter of FY 2010-11. The total of Rs. 189.38 crore claimed by PSPCL includes Rs. 114.16 crore as change in fuel cost and Rs. 75.22 crore as change in power purchase cost.

The Commission In the Tariff Order for FY 2010-11, issued on April 23, 2010 under para 4.7 relating to Fuel Cost, had decided as under:

“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. Punjab State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005 contain the FCA formula according to which any change in fuel cost would be passed on to the consumers with prior approval of the Commission”.

In view of the above, the Commission worked out the Fuel cost adjustment for the 3rd quarter of FY 2010-11. To arrive at the change in fuel cost from the level approved by the Commission for own thermal stations of PSPCL, the fuel cost for actual generation during 3rd quarter has been worked out both with parameters including prices and gross calorific value of coal and oil approved by the Commission in Chapter 3 of this Order as well as with actual prices and gross calorific value of coal and oil as intimated by PSPCL in the petition, but keeping performance parameters as approved by the Commission in its Tariff Order for FY 2010-11. The fuel cost adjustment for the 3rd quarter has been worked out with parameters including price and gross calorific value of coal and oil approved by the Commission in Review of FY 2010-11 in Chapter-3 of this Order, as these values have been considered for calculating the fuel cost for the second half of

FY 2010-11 in the Review of FY 2010-11. Accordingly the fuel cost adjustment amount has been worked out as Rs. 60.48 (890.22 – 829.74) crore.

To arrive at the change in power purchase cost due to change in fuel cost alone for Central Generating Stations (as mentioned in FCA formula), the change in variable cost of NTPC and NPC stations for which the Commission has approved variable cost have been considered. The variable cost of NTPC and NPC stations for the actual quantum of power purchase during the quarter has been worked out both with the variable per unit cost approved by the Commission in the Review of FY 2010-11 in Chapter-3 of this Order, wherein power purchase cost from concerned Central Generating Stations and other sources for 2nd half of FY 2010-11 (3rd and 4th quarters of FY 2010-11) has been approved on proportionate basis on the basis of costs (including variable costs for NTPC and NPC stations) for 1st half of FY 2010-11, as well as with variable per unit cost as intimated by PSPCL for the 3rd quarter. Accordingly, the fuel cost adjustment amount on this account has been worked out as Rs. 1.19 crore. Thus, the total fuel cost adjustment amount during the 3rd quarter works out to Rs. 61.67 (60.48 + 1.19) crore.

With the fuel cost adjustment amount of Rs. 61.67 crore, the fuel surcharge applicable w.e.f. 1st April, 2011 works out as under:

Metered category consumers FCA_M	= 7.95 paise/unit Rounded to 8 paise/unit.
Unmetered category (AP) consumers FCA_{HP}	= Rs. 6.84/kW/Month i.e. Rs. 5.10/BHP/Month Rounded to Rs. 5/BHP/Month

Thus, the Commission decides that the FCA @ 8 paise/unit for metered categories and Rs. 5/BHP/Month for unmetered category (AP) shall also be leviable w.e.f. 01.04.2011 in addition to the tariff determined in Table 6-1. Thus, the Petition no. 15 of 2011 is disposed of accordingly.

As per present policy of GoP, supply of power to AP consumers and 100 units per month to SC DS and Non-SC BPL DS consumers is given free of cost

and PSPCL is compensated for the loss on this account by GoP. With the enforcement of fuel cost adjustment w.e.f. 1.4.2011, the additional subsidy on this account will also become payable by GoP.

6.14 Payment Security Mechanism for payment of Inter-State Transmission Charges

6.14.1 Central Electricity Regulatory Commission has notified CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 which are likely to be made effective from July 01, 2011. As per Clause 11(2) of these Regulations:

“The bill for the use of the ISTS shall be raised by the CTU on the concerned Designated ISTS Customers. The SEB/STU may recover the transmission charges for the use of the ISTS from the distribution companies, generators and bulk customers connected to the transmission system owned by the SEB/STU/intrastate transmission licensee in a manner approved by the Appropriate Commission.”

Further, the definition of Designated ISTS Customers as per the above said Regulations is as under:

“Designated ISTS Customers (‘DIC’s) means the users of any segments/elements of the ISTS and shall include all generators, state transmission utilities, SEBs or load serving entities directly connected to the ISTS including Bulk Consumer and any other entity/person;”

6.14.2 Further, as per clause 15(1)(d) of the above said Regulations, the CTU (PGCIL) has drafted a procedure of billing and collection of charges by the PGCIL on behalf of Transmission Licensees (Central) and redistribution of the same (including amounts over or under collected), which is yet to be approved by CERC.

6.14.3 The Commission therefore, directs PSPCL to make back to back arrangements with PSTCL for payment of Inter-State Transmission Charges as per procedure approved by CERC, with effect from the commencement of applicability of the above mentioned Regulations.

6.15 Date of Effect

The Commission notes that the ARR of PSPCL for the FY 2011-12 covers the complete financial year. The recovery of tariff, therefore, has to be such that the total revenue requirement of PSPCL for the FY 2011-12, (excluding the amount converted to Regulatory Asset) is recovered in this period.

The Commission, therefore, decides to make the revised tariffs applicable from April 01, 2011 and the tariff structure determined above shall remain operative till March 31, 2012.

This Order is signed and issued by the Punjab State Electricity Regulatory Commission on this the 9th day of May, 2011.

Date: May 9, 2011

Place: CHANDIGARH

Sd/-	Sd/-	Sd/-
(GURINDERJIT SINGH)	(VIRINDER SINGH)	(ROMILA DUBEY)
MEMBER	MEMBER	CHAIRPERSON

CERTIFIED

Sd/-
SECRETARY
PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
CHANDIGARH