Order on ARR and Tariff Petitions for the year 2009-10

of

Chhattisgarh State Power Generation Company Ltd.
[Petition No. 10/2009(T)]

Chhattisgarh State Power Transmission Company Ltd.
[Petition No. 11/2009(T)]

Chhattisgarh State Power Distribution Company Ltd.
[Petition No. 12/2009(T)]

CHHATTISGARH STATE
ELECTRICITY REGULATORY COMMISSION

30th May, 2009

CHHATTISGARH STATE ELECTRICITY REGULATORY COMMISSION
RAIPUR

Petition No. 10 of 2009(T)
Petition No. 11 of 2009(T)
Petition No. 12 of 2009(T)

Present : Shri S.K. Misra, Chairman
Shri B.K. Sharma, Member

In the matter of –

(1) Approval of annual revenue requirement (ARR) for the year 2008-09 and generation tariff for the year 2009-10 for Chhattisgarh State Power Generation Co. Ltd.

(2) Approval of annual revenue requirement (ARR) for the year 2008-09 and transmission tariff for the year 2009-10 for Chhattisgarh State Power Transmission Co. Ltd.

(3) Approval of annual revenue requirement (ARR) for the year 2008-09 and determination of ARR and retail supply tariff for the year 2009-10 for Chhattisgarh State Power Distribution Co. Ltd.

ORDER
(Passed on 30.05.2009)

This order is passed in respect of the applications filed by the Chhattisgarh State Power Generation Company Ltd. (CSPGCL), the Chhattisgarh Power Transmission Company Ltd. (CSPTCL), and the Chhattisgarh State Power Distribution Company Ltd. (CSPDCL), the successor to the Chhattisgarh State Electricity Board (CSEB or the Board, for short) for approval of the Annual Revenue Requirement (ARR,) for the financial year 2008-09 and 2009-10 and generation tariff, transmission charges and retail supply tariff respectively, for the year 2009-10, under the provisions of section 45 and 62 read with section 86(1) of the Electricity Act, 2003 ('the Act'). This joint order is passed by the Commission on the three separate petitions filed by these companies, after having considered all the information and documents filed with the said applications and filed subsequently in course of consideration of the applications, as also all the information available to the Commission, and after having heard the applicant companies, the consumers and their representatives and other stakeholders in the public hearings held by the Commission. Although the petitions for approval of the ARR and determination of tariff have been filed by the three companies separately, this single order is being passed for all the three petitions, since the restructuring of CSEB, of which the three companies are successors, has not been completed in that their accounts have not been separated and separate balance sheets not prepared and personnel not yet allocated.

2. In the last tariff order, for the year 2007-08, passed on 22.10.07 in petition no. 19 of 2007(T), this Commission had directed the erstwhile CSEB to prepare for the Multi-Year Tariff (MYT) regime, as mandated in the Tariff Policy (TP), 2006 then proposed to be introduced from the year 2009-10. The Board was directed to get certain sample studies conducted so that necessary base data are available to enable introduction of MYT. In the meantime, the Commission has also framed the necessary multi-year tariff regulations i.e. the CSERC (Terms and Conditions of determination of tariff according to multi-year tariff principles) Regulations, 2008. As per these Regulations the MYT framework was required to be followed for determination of tariff from the year 2009-10. The Board was required to prepare and get the Commission's approval, of a business plan for three years from 2009-10 till 2011-12, being the first control period of the MYT regime. On the request of the Board the Commission did not insist on filing of tariff application for the year 2008-09 so as to allow it sufficient time to prepare for filing of MYT application

in time (November, 2008). The Board, however, defaulted in submission of the business plan and the MYT application. In the meantime, the Government of Chhattisgarh restructured the CSEB w.e.f. 01.01.09, in pursuance of the provisions of part XIII of the Act. However, as already mentioned separate accounts of the companies are yet to be prepared, which, as per the Government notification, would be done within one year. Under these circumstance, the Commission had no option but not to insist on compliance with the provision of the MYT Regulations and has accepted applications for determination of tariff only for the current year as per the old tariff regulations of 2004 and 2006 which have not been repealed. The Commission, however, directs the three companies to prepare their business plans for the first control period of three years, for the years 2010-11 to 2012-13 now and prepare for the MYT regime to be introduced from the year 2010-11. The Commission notes with some concern that the erstwhile CSEB failed to file application for determination of tariff in time (in the month of November) as per the Commission's regulations, every time on the last three occasions, as also this time resulting in delay in finalization of tariff orders. This order again has to be made effective only from the 1st July, 2009 and not the 1st April because the tariff applications were filed only on 26th February, 2009. The companies should now ensure that tariff petitions under MYT principles are filed in time in November, 2009 so that the next tariff order takes effect from 1.4.2010.

3. In the assessment of the revenue requirements of the three companies and tariff determination, the Commission has followed its regulations on terms and conditions for determination of tariff (2006) which embody the principles for determination of tariff,enunciated in section 61 of the Act. In passing this order, the Commission has also been guided by the National Electricity Policy (NEP), 2005 and the Tariff Policy (TP), 2006, as mandated under the same provision of the Act. In the assessment of the revenue requirements for the year 2009-10 projected

by the three companies, the Commission has been guided by the principles laid down in the Tariff Policy and, as far as possible, by the latest regulations (2009) of the Central Electricity Regulatory Commission (CERC, for short) on terms and conditions of tariff, particularly in respect of the generation and transmission companies. The Commission has taken care to ensure that the revenue requirements of the companies are based, as far as possible, on reasonable and prudent expenditure, required to enhance generation capacity in the State and expand the transmission and distribution network to meet the growing demand for electricity, and enhance the quality of service and operational efficiency of the companies. The Commission is constrained to note that there is very little improvement in the quality of the data and information furnished by the companies. Statutory audit of the accounts of the Board has been done only up to 2003-04. The ARR projections have been examined on the basis of the provisional accounts and the data furnished by the Board.

4. The companies have requested for truing-up of ARR of FY 2007-08 and approval of ARR for the year 2008-09 as also of the current year. During the year 2007-08 the erstwhile CSEB operated as an integrated electricity utility and the truing-up exercise has to be done on the basis of allocation of common expenditure as envisaged in the tariff order for that year. The impact of truing-up of FY 2007-08 has to be passed on to the consumers through the present ARR of the distribution company i.e. CSPDCL, based on the provisional accounts of erstwhile CSEB. The Commission has accordingly carried out truing-up for the year 2007-08 for erstwhile CSEB as a whole rather than for the three companies separately, which were not in existence during that year. So far as approval of the ARR of 2008-09 is concerned, it is to be noted that the erstwhile CSEB operated till December, 2008 and the companies have been created and are in operation since January, 2009 only. The companies have filed ARR for FY 2008-09 based on the allocation of the common expenditure of the erstwhile CSEB in the absence of opening

balance of the year 2008-09. Although the year is now over, the companies have not submitted the data for the whole of the year 2008-09. Operational performance of the generating stations for the entire FY 2008-09 has been submitted, but consumer category -wise sales and the revenue data have been furnished only till January, 2009 and capital investment of O&M expenditure till December, 2008. Since the year is over, the Commission does not find any merit in approving the ARR on the basis of projected expenditure and that too projections based on allocation of expenses amongst three companies in the absence of opening balance of each of them. The Commission has, therefore, decided that it will consider the ARR and revenue for the year 2008-09, while considering the ARR and tariff petitions of three companies for the year 2010-11, based on data made available by the companies for the whole year based on provisional accounts of the erstwhile CSEB for the period April to December, 2008 and provisional accounts for the three companies for the period January to March, 2009. However, for arriving at the ARR of the current year, certain figures of the previous year (FY 2008-09) have been taken into consideration so as to ensure that the current year's ARR is more realistic. In this order the Commission has considered the various elements of expenditure for FY 2008-09 based on the details provided by the companies. However, the expenses for FY 2008-09 have been taken into consideration in this order merely for making the projections for FY 2009-10 more realistic and should not be construed as approval of the expenses for FY 2008-09 by the Commission.

5. The generating company (CSPGCL) had projected the ARR for the year 2009-10 at Rs.2019 crore and on that basis generation tariff proposed at Rs.1.72/unit. The generation tariff approved by the Commission for the year 2007-08 was Rs.1.08/unit. After scrutiny the Commission has approved the generation company's ARR at Rs.1745 crore only and the generation tariff at Rs.1.44/unit. The Transmission company (CSPTCL) had proposed the ARR of Rs.282.7 crore, including the

ARR of SLDC, and transmission charge of Rs.0.17/unit. The Commission on scrutiny has approved the ARR of Rs.247 crore for the transmission company and transmission charge of Rs.0.15/unit for the current year. The transmission charges approved for the year 2007-08 was Rs.0.13/unit. The ARRs approved for the CSPGCL and the CSPTCL have been taken into account in the assessment of ARR of CSPDCL since the company has to bear the expenditure on purchase of power and the cost of transmission.

6. The CSPDCL has proposed an ARR of Rs.4460 crore in its tariff application and a revenue gap of Rs.842.8 crore on the basis of prevailing tariff. To meet this deficit the distribution company had proposed average increase of 13% in retail tariff. The Commission on scrutiny, has, however, accepted and approved the ARR of Rs.3682 crore only which is Rs.778 crore less than the ARR projected by CSPDCL. The revenue projected from the current tariff being Rs.3451 crore, there would be a deficit of Rs.231 crore only. However, there is a revenue surplus of Rs.116 crore for the year 2005-06 and 2006-07, and for 2007-08 the surplus of revenue over expenditure is Rs.220 crore. The projected deficit of Rs.231 crore for the current year has been set off against the surplus of Rs.336 crore (Rs.116 crore for the year 2005-06 and 2006-07 Rs.220 crore for the year 2007-08), thus leaving a surplus of Rs.105 crore at the end of the year. This surplus could have been passed on to consumers by way of reduction in tariff. The Commission has, however, decided that this amount be kept as a separate fund to be the ‘tariff stabilization fund’ for balancing the tariff in the future years. This should appear to be the most reasonable course at this juncture because the effect of restructuring of erstwhile Board is not yet clear. Secondly, the ARR for the year 2008-09 has not been approved by the Commission. It will be scrutinized and approved on the basis of actual expenditure when the tariff petition for the year 2010-11 is submitted by CSPDCL.

7. In view of the above position, no major modification in the prevailing retail tariff has been made by the Commission. The Commission has, however, rationalized the tariff to certain extent, a process which is being carried forward since the very first tariff order for the year 2005-06. This has resulted in a marginal surplus of Rs.15 crore which has been adjusted against the loss of revenue due to abolition of meter hiring charges of domestic consumers.

8. The Commission has noted that earlier the erstwhile CSEB and now the CSPDCL, has surplus of revenues over annual revenue requirement, almost every year. Sale of excess power – and some off-peak excess availability is inevitable if the peak load is to be adequately catered for - is likely to yield some surplus during 2008-09, and perhaps in the current year. This is a great opportunity for CSPDCL, which is not available to any other power utility in the country, to bolster its own resources and use it judiciously in the best interest of the company and the consumers. Part of the surplus should appropriately be kept apart in a tariff stabilization fund and used to ensure a stable tariff regime in the State for some years, during this period of economic recession. This will be in the larger interest of the State and will contribute to its industrialization and economic development. A part of this surplus should be expended to provide better service to the consumer, something very much lacking in this State and which the Commission has been emphasizing repeatedly in its tariff orders and otherwise. Whatever expenditure is incurred by the CSPDCL for providing better service to its consumers will always be treated by this Commission as a pass-through in the tariff, even if it does not result in higher revenue.

9. In this order the Commission has approved the ARR of the three companies for FY 2009-10 and has determined generation tariff, the transmission charges and the retail tariff for the consumers for the current year. This order shall remain in force till 31st March 2010 or till

the next tariff order of this Commission, whichever is later. The revised tariff will be applicable with effect from 1st July, 2009.

10. The Commission directs the companies to take immediate steps to implement the tariff order. They shall give a public notice of seven days in accordance with the CSERC (Details to be furnished by the licensees or generating company etc.) Regulations, 2004 before implementation of tariff.

B.K. Sharma
Member

S.K. Misra
Chairman

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1 INTRODUCTION

1.1 Background (Restructuring)

Since the last tariff order was passed by the Commission, a significant development has taken place with regard to the structure of the Power utility in the State. The process of restructuring of the Chhattisgarh State Electricity Board (CSEB) has been initiated by the State Government in pursuance of the Provisions of part XIII of the Electricity Act, 2003. The GoCG vide notification No. 1-8/2008/13/1 dated December 19, 2008 issued the CSEB Transfer Scheme Rules, 2008 with effect from January 1, 2009. As per the rules, the erstwhile CSEB has been unbundled into five independent Companies viz. Holding Company, Generation Company, Transmission Company, Distribution Company and Trading Company. Chhattisgarh State Power Generation Company Limited (CSPGCL) is a State Power Generation Company, Chhattisgarh State Power Transmission Company Limited (CSPTCL) is a State Power Transmission Company and Chhattisgarh State Power Distribution Company Limited (CSPDCL) is a State Power Distribution Company. However, the assets and liabilities of erstwhile CSEB are not yet allocated to the successor companies. The three new power companies i.e. CSPGCL, CSPTCL and CSPDCL have submitted three separate petitions for provisional true-up of erstwhile CSEB for FY 2007-08, ARR for FY 2008-09 & 2009-10 and tariff petition for FY 2009-10. Under the provisions of the Electricity Act, 2003, the mandate of determination of tariffs is vested in the Chhattisgarh State Electricity Regulatory Commission (the Commission).

1.2 The Electricity Act, 2003, Tariff Policy (TP) and Regulations

Section 61 of the Electricity Act, 2003 (EA, 2003) stipulates the guiding principles for determination of the tariff by the Commission and mandates that the tariff should 'progressively reflect cost of supply of electricity', 'reduce cross subsidy', 'safeguard consumers interest' and 'recover the cost of electricity in a reasonable manner'. This Section also stipulates that the Commission while determining the tariff shall be guided by the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees.

Section 62 of the Electricity Act, 2003 stipulates the Commission shall determine the tariff for :

- supply of electricity by a generating company to a distribution licensee ;
- transmission of electricity ;
- wheeling of electricity ; and
- retail sale of electricity.

The Tariff Policy (TP) notified by the Government of India in January 2006, provides the framework to balance the conflicting objectives of attracting investments to ensure availability of quality power and protecting the interest of consumers by ensuring that the electricity tariffs are affordable even for the weaker sections of society.

The Commission has set up the necessary regulatory framework within which determination of tariff may be done in an open and transparent manner. The Commission has notified the following Regulations, which have impact on tariff setting principles and norms:

- CSERC (Fees and Charges) Regulations, 2004
- CSERC (Conduct of Business) Regulations, 2004
- CSERC (Details to be furnished by licensee etc.) Regulations, 2004.
- CSERC (Intra-State Open Access in Chhattisgarh) Regulation, 2005
- CSERC (Terms and Conditions for Determination of Tariff) Regulations, 2006
- CSERC (Fee & Charges) (First Amendment) Regulations, 2005
- Guidelines for Power Purchase and Power Procurement Process, 2006
- Chhattisgarh State Electricity Grid Code, 2007
- CSERC (Intra-state Open Access in Chhattisgarh – First Amendment) Regulation, 2007.
- CSERC (Grid Code_ First Amendment) Regulations, 2008.
- CSERC (Security Deposit_ First Amendment) Regulations, 2007
- CSERC (License) Regulations, (First Amendment) 2008.
- CSERC (Terms and Conditions of determination of tariff according to Multi Year Tariff principles) Regulations, 2008.

The Central Electricity Regulatory Commission (CERC) had earlier issued CERC (Terms and Conditions of Tariff) Regulations, 2004 which were considered by the Commission while issuing the tariff orders in the previous years. The CERC has since issued the CERC (Terms and Conditions of Tariff) Regulations, 2009 (Central Regulations) which have been made effective from April 1, 2009 onwards. Section 61 mandates the Commission to be guided by the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees. The Commission in accordance with the provisions of Section 61 of the EA, 2003 has given due consideration to the CERC (Terms and Conditions of Tariff) Regulations, 2009 for determining the ARR and Tariff for FY 2009-10 in this order.

1.3 Brief Note of Tariff Filing and Public Hearing

The erstwhile CSEB as an integrated utility had to submit a MYT petition, to the Commission by November 30, 2008, as required under CSERC (Terms and Conditions of determination of tariff according to Multi Year Tariff principles) Regulations, 2008.

The Commission in its previous tariff order dated October 22, 2007 directed that CSEB should submit five year business plan including capital investment plan for the period beginning FY 2008-09 within three months of issuance of the tariff order afore mentioned. However, CSEB had submitted the business plan for three year period from FY 2009-10 to FY 2011-12 on December 05, 2008. Due to delay in submission of Business Plan of the erstwhile Board for the control period of three years, the MYT petition was also delayed. In the meantime, as already mentioned, the GoCG initiated the process of restructuring and vide notification No. 1-8/2008/13/1 dated December 19, 2008 issued the CSEB Transfer Scheme Rules, 2008 with effect from January 1, 2009.

In view of these developments, the three Companies i.e., CSPGCL, CSPTCL and CSPDCL in their respective petitions have submitted that it was not possible for them to file the MYT petition at this stage as the number of base parameters would be changed as per transfer scheme yet to be notified by GoCG. The companies requested the Commission to permit filing of ARR for FY 2008-09 and FY 2009-10 and tariff petition for FY 2009-10. In view of the developments, the Commission has allowed the three Companies to file single year tariff petition for FY 2009-10 in place of the MYT petition.

The Companies (CSPGCL, CSPTCL and CSPDCL) filed the three petitions for provisional true up for FY 2007-08, approval of ARR for FY 2008-09 and FY 2009-10 and determination of tariff for FY 2009-10 on January 22, 2009. On a cursory examination of the petitions, certain anomalies were noticed and conveyed by the Commission to the Companies vide letters dated January 28, 2009. CSPGCL, CSPTCL and CSPDCL have submitted the corrected ARR and tariff petitions on February 26, 2009. These petitions were admitted by the Commission and these were registered as Petition No. 10/2009(T), 11/2009(T) and 12/2000(T) respectively. The Commission has directed the Companies to publish the abridged version of the petition in Hindi and English newspapers for inviting comments/objections/suggestions from the public.

The Companies published a notice comprising details of ARR, revenue gap with existing tariff, proposed category-wise tariffs and salient features of the ARR and tariff petitions in the following newspapers on February 28, 2009:

- Dainik Bhaskar

- Nav Bharat
- Hari Bhumi
- The Hitvada
- Desh Bandhu
- Nai Dunia

The Companies also sent the copy of the abridged Hindi version of the tariff petition to all the members of the State Advisory Committee of the Commission on April 06, 2009 for their comments. A copy of the tariff petitions (in English) was also sent to the Energy Department of the State Government. The Commission has fixed March 31, 2009 as the last date for submission of written objections and suggestions. The Commission has also directed the Companies to send written replies to the respective objectors with copies endorsed to the Commission. The objections raised by the public have been dealt separately in section-2 of this order.

The Commission has received objections and suggestions from a total of 143 stakeholders on a variety of issues, which are detailed in section-2 of this order.

Notices for public hearings were published in the following leading newspapers of the State. Besides, wide publicity was also given through local newspapers at Raipur, Bilaspur and Jagdalpur:

Table 1.1

<table>
<tr><th>Newspaper Name</th><th>Dates of Notice Published</th></tr>
<tr><td>Nav Bharat, Raipur & Bilaspur</td><td>April 09, 2009</td></tr>
<tr><td>Dainik Bhaskar, Raipur & Bilaspur</td><td>April 10, 2009</td></tr>
<tr><td>Hari Bhumi, Bilaspur</td><td rowspan="3">April 09, 2009</td></tr>
<tr><td>The Hitvada, Raipur</td></tr>
<tr><td>Desh Bandhu, Raipur</td></tr>
<tr><td>Nai Dunia, Raipur</td><td>April 10, 2009</td></tr>
</table>

The Commission held public hearings with a view to give adequate opportunity of personal hearing to the objectors. Hearing was held not only on the representations / comments received but an opportunity was also given for open hearing to all the participants, irrespective of whether they had submitted written objections / comments on the tariff application or not, at the following places in the State:

Table 1.2

Public Hearings

Sl.	Place	Date of pubic hearing
1	Raipur	17.04.2009 & 18.04.2009
2	Bilaspur	20.04.2009
3	Jagdalpur	22.04.2009

1.4 State Advisory Committee Meeting

A special meeting of the State Advisory Committee, constituted under Section 87 of the Act, was convened on April 13, 2009 to discuss the tariff petitions and seek the advice of the Committee. The Companies gave a presentation in the meeting on the salient features of the tariff application. Various aspects of the tariff application were discussed by the Members of the Committee in the meeting and following valuable suggestions were given for consideration of the Commission: -

i) Revenue surplus for the FY 2007-08 and FY 2008-09 should not be converted into the equity of restructured companies and the electricity tariffs may be reduced suitably considering the revenue surplus.

ii) The proposal submitted by the CSPDCL regarding Time of Day (TOD) tariff is not proper and the Commission may please take suitable decision in this regard.

iii) The load factor has been considered by CSPDCL in their proposal as 25.74% for agriculture consumption for the FY 2009-10, where as in the previous tariff proposals submitted by erstwhile CSEB, it was 18%.

iv) The electricity tariffs should not be increased, however, these tariffs may be rationalized. Further as envisaged in the Electricity Act, 2003 the cross subsidy should be reduced to the extent possible and the categories of the tariffs may also considered to be reduced.

v) Tariffs for the consumption of energy in the street lights provided by the private companies in their area should be equivalent to the tariff applicable to consumption of the street lights provided by the Municipal Corporations.

vi) The tariff for industries may be reduced suitably to enable the industries to overcome the recent recession in the market.

vii) CSPDCL should be directed to reduce the theft of energy and if it fails to do so, suitable provision of penalty on the Company should be made.

2 OBJECTONS AND SUGGESTIONS FROM THE PUBLIC/CONSUMERS AND PETITIONER'S RESPONSE

REGULATORY PROCESS

Though the three successor companies of erstwhile CSEB i.e. Chhattisgarh State Power Generation Company Limited (CSPGCL), Chhattisgarh State Power Transmission Company Limited (CSPTCL) and Chhattisgarh State Power Distribution Company Limited (CSPDCL) filed separate petitions for approval of ARR and determination of tariff for FY 2009-10, the petitions filed by all three companies were processed together and the common public hearings were held on the petitions. The common public process was followed due to several reasons such as non-availability of final transfer scheme towards allocation of assets and liabilities to erstwhile CSEB amongst successor companies, availability of previous year's expenses on consolidated basis for erstwhile CSEB and apportioning of the same based on certain assumptions amongst the successor companies, etc.

As required under clause 21 of the CSERC (Details to be furnished by licensee etc.) Regulations, 2005, the Companies (CSPGCL, CSPTCL and CSPDCL) published a public notice in leading newspapers of the State giving in brief, the ARR and salient features of the petition. Suggestions, objections and comments on the CSPGCL, CSPTCL and CSPDCL petitions were invited from the public by March 31, 2009. The list of newspapers in which the public notice was published is given in section -1. Some of the objections were received directly by the Companies. All written objections were forwarded by the Commission to the Companies as and when they were received and the Companies were asked to submit its replies and views in respect of the objections. The list of objectors is annexed to this order as Annexure-1.

To ensure transparency in the process of tariff determination, as envisaged in the Electricity Act, 2003, public hearings were held as per details given in table 1.2.

In the public hearings, some of the objectors who had submitted their objections in writing earlier, presented their objections and suggestions personally before the Commission. Other participants from the general public, who had not submitted written objections earlier, were also given an opportunity to present their views in respect of the tariff proposals. The list of participants who attended public hearing is annexed as Annexure-2.

OBJECTIONS RAISED AND PETITIONER'S REPLIES

As discussed above, common hearings were held on petitions filed by the three companies. The views and suggestions of the objectors on the petitions and the replies given by the companies are discussed in this section:

Issues common to all the three companies

2.1 Audited accounts and Actual Expenditure

Several respondents have asked the companies to submit the audited annual accounts for 2005-06, 2006-07 and 2007-08 alongwith income tax returns of erstwhile CSEB to ascertain their profit. One of the respondent has stated that the accounts have not been audited since 2004-05 and in the absence of audited accounts for 2005-06, 2006-07 and 2007-08, the ARR and tariff petitions of CSPGCL, CSPTCL and CSPDCL should not be processed. Chhattisgarh Mini Steel Plan Association has asked for submission of expenses in different heads approved by the Commission and actual expenditure incurred alongwith break up of variation in actual expenditure with approved expenditure under controllable and uncontrollable heads.

Bhilai Steel Plant (BSP) has submitted that the ARR and tariff proposals submitted by three companies are based on inaccurate information and apportioning of certain expenditure heads among the five companies. In the absence of authentic data based on audited accounts, the ARR and tariff petitions should be rejected.

During the public hearing, Urla Industries Association has submitted that strict time-bound directions should be issued to Companies for CAG audit of annual accounts and any truing up exercise should be taken after getting CAG audit report. They have further submitted that since the provisional truing up for FY 2005-06 and FY 2006-07 has already been carried out the Commission, the provisional VCA calculations should also be released by the Commission.

Petitioner's reply

The Auditor General audit is in process since November 2005 and the accounts up to the financial year 2003-04 have been audited. The provisional account of the year 2004-05 is under the process of audit. Therefore the audited accounts for the year 2005-06, 2006-07 and 2007-08 are not available. The Companies have further submitted that it agrees with the views of the consumers that the truing up exercise for previous years i.e. FY 2005-06, FY 2006-07 and FY 2007-08 can only be taken up after completion of statutory audit for respective years which is in progress.

In reply to issue raised by BSP, the petitioner has submitted that these proceedings are under Suo Motu petitions instituted by the Commission and available information has been submitted to the Commission. Auditing of the accounts is not fully within the purview of successor companies of CSEB and Statutory Auditor, the Auditor General of Chhattisgarh is undertaking this work within their limitations.

2.2 Quality of Petitions

Urla Industries Association has submitted that the presentation and data compilation of present petition is extremely poor and hence it has become tedious and time taking job to investigate, compare and verify the data/information provided.

One of the respondents has requested for simplification of the tariff petition to be able to understand it better. Some respondents have submitted that that some of the forms submitted alongwith petitions are either not filled or partially filled. They have suggested that the Petitioners should submit the complete details in all the forms prescribed by the Commission.

Petitioner's reply:

The petitioner company is in the infant and transitional stage and therefore better presentation was not easy, rather impossible. However, the Petitioner shall try their best to satisfy on each query of the respondents.

2.3 Treatment of revenue surplus

Some of the respondents have asked for information on utilisation of revenue surplus earned by erstwhile CSEB for the previous years. Urla Industries Association has objected the proposal of converting revenue surplus of Rs 787 Crore since FY 05-06 into equity of successor companies of erstwhile CSEB and suggested to form Regulatory Fund equivalent to the surplus amount. Urla Industries Association has suggested that the revenue surplus/deficit should be ascertained only after statutory audit, truing up and VCA provisions. They have further suggested that with the surplus available, a Tariff Contingency Fund should be formed under the control of Commission which shall be useful in future to avoid losses to Companies and tariff shock to retail consumers.

Petitioner's reply

Till the auditing of accounts for previous years is not completed, the surplus/deficit status may change. However, the revenue surplus till FY 2007-08 is under consideration of the State Government to convert into the equity base of successor companies of CSEB because CSEB had the equity base of Rs 23 Crore only and the newly formed companies require some reasonable equity base to enable them to borrow loans from financial institutions.

2.4 Employee expenses

Several respondents have asked about details of terminal benefits to employees including contribution made till date to the Pension Trust. They have also enquired about details of investment made through the Trust and return on such investments. Urla Industries Association has questioned contribution of Rs 394 Crore in FY 2008-09 and Rs 394 Crore in FY 2009-10 to the Pension and Gratuity Fund by the three companies. Some of the respondents has objected to the proposed increase of 6% in Dearness Allowance in the era of recession and dipping down of price indices.

CG Rajya Vidyut Karmchari Janta Union has submitted that as on March 31, 2009, Rs 3200 Crore is required in pension fund for employees. The proposed tariff would result in deposit of Rs 2000 Crore only to this fund. The Union has submitted that the management of this fund should be handed over to them in order to maintain transparency.

Petitioner's reply

The proposal for contribution to Pension Trust is an essential requirement to quickly get rid of burden of retired and retiring employees. The Petitioner has submitted the information with respect to Pension Trust as follows:

• Present liability of Pension Trust as per latest actuarial valuation: (as on 31 March, 2008)	Rs 2735 Crore
• Available fund in the Trust (contribution till date):	Rs 1640 Crore
• Interest/appreciation earned so far	Rs 360 Crore
• Total value of fund as on date	Rs 2100 Crore

The Petitioner has further submitted that the provision for 6% increase in Dearness Allowance is based on the past trend. The increase in D.A. is declared by Central Government based on the actual average increase in price index during last six months. In case the increase in price index is less than expected, then the actual rise shall be reduced accordingly. The Petitioner has further submitted that the projections can be made on the basis of past experience only and the truing up exercise is meant to account for the actual expenses and achievements.

2.5 Return on Equity

Urla Industries Association has raised objection on the proposed increase in Return on Equity as compared to Return on Equity allowed for FY 2007-08 and has suggested that this aspect should be examined in detail by the Commission. During the public hearing, Urla Industries Association has submitted that the Return on Equity should be allowed at 14% and while computing the Net Worth of the Companies, the amount of revenue surplus should not be considered.

Petitioner's reply

The rate of return on equity has been proposed to be raised from 14% to 17.48% in accordance to the provisions under the recently notified CERC's Terms and Conditions on Tariff Regulations, 2009. Further, due to rapid growth in infrastructure the net worth of the company has also increased. Therefore the Return on Equity for FY 2009-10 is proposed higher than the Return on Equity allowed for FY 2007-08.

2.6 Interest charges

Urla Industries Association has submitted that there are certain discrepancies in the provision of Interest for Public Bonds, Loan from REC, New loans, Loan under APDRP scheme, Loan from PFC etc. They have also highlighted that the information provided in respect of the loans is incomplete. During the public hearing, Urla Industries Association has submitted that no provisions should be allowed for interest on working capital in the ARR.

Petitioner's reply

The Petitioner has submitted that the complete information with respect to existing loans has been subsequently submitted to the Commission.

2.7 Increase in A&G Expenses and R&M Expenses

BSP has submitted that the rate of inflation of 9% for R&M and 7% for A&G considered in ARR and tariff petitions is too high considering downward trends in WPI and has requested the Commission to approve suitable rate of increase for these expenses considering the latest trends in WPI. They also sought clarification on methodology adopted by companies for computing Repairs & Maintenance (R&M) expenditure.

Petitioner's reply

The Petitioner has submitted that with frequently fluctuating rate of inflation, prudent projection cannot be made for a period of one year. The prudent approach is to capture all such variations over a year and make the projections on the basis of average rate over the years.

The CERC Regulations are guiding principles for State Commissions as per provision under Section 61(1) of the Act and not mandatory to follow. Most of the power plants in the state are quite old plants and relaxed norms are essential for such plants. Further, for such old and uncommon designed plants no norm for calculating O&M expenses can be followed. Hence, projections based on the past trend have been made.

2.8 Power trading

Urla Industries Association has objected on the proposal of eliminating power trading activity from the purview of CSPDCL stating that it has earned more than 27% of its revenue from such activity in FY 2007-08 and its removal will lead to further tariff increase in the future. Chhattisgarh Mini Steel Plan Association has asked about the detailed mode and methodology of trading activity. Several respondents have raised the concern for creating a trading company and loading consumers with purchase of high cost of power from costly sources like traders.

During the public hearing, Urla Industries Association has submitted that the distribution company should be allowed to trade power in the Inter State market to the extent of minimum 25% of its retail sale and income earned through trading should be used to reduce wheeling charges and retail supply tariff. They have further submitted that the power trading should not be done by applying power cuts to retail consumers.

Petitioner's reply

Schedule IV of the transfer scheme describes the functioning of the Chhattisgarh Power Trading Company Limited as a successor company of CSEB.

The sale of electricity outside the distribution licence area of distribution licensee is the activity other than the distribution function and is termed as trading of electricity. Trading is an integral function of distribution licensee which cannot be isolated. Under the last proviso of Section 14 of the Electricity Act 2003, the distribution licensee is allowed to undertake trading without licence. Under the transfer scheme of CSEB, the provision is made under Chapter III Part II (e) enabling CSPDCL to undertake trading. There cannot be any proposal to restrict the Distribution Licensee from trading.

The extra revenue earned out of this trading activity has also been considered to off set the tariff of retail consumers by incorporating it into the non tariff income into the ARR.

Generation Specific Issues

2.9 Cost of power generation

Urla Industries Association has objected on CSPGCL's proposal on per unit cost of generation. It stated that various factors, which affect the cost of generation such as Plant Load Factor, Station Heat Rate, Gross Calorific Value of coal and oil, prices of coal and oil, transit and stacking losses, specific oil consumption and auxiliary consumption, are designed in such a manner that they are away from the actual/expected results and falsely leading to the increase in per unit cost of generation. Some of the respondents have asked for reasons for increase in cost of coal, its consumption in generating per unit of electricity and its effect on the cost of generation.

Urla Industries Association during the public hearing has submitted that a "Fuel Adjustment Formula" should be approved by the Commission for the Generation Company.

Petitioner's reply

The majority of power plants of CSPGCL are quite old plants and almost completed or have been completing their expected operational life and hence the contribution of fixed cost element in total cost is negligible. However, because of the ageing effect, the operational efficiency has deteriorated and the contribution of variable cost in total cost has increased. The Petitioner has further submitted that the over efficient operation of such old plants will result into speedy deterioration of the remaining life of the plant and therefore, it is preferred to operate these plants at little lower efficiency of operation to maintain the continuity of supply as far as possible. The Petitioner has emphasised that even with the efficiency parameters proposed in the petition, the average cost per unit of generation of CSPGCL's power plants is quite less as compared to the similarly placed plants.

2.10 Plant Load Factor

BSP has submitted that the PLF proposed by CSPGCL for FY 2009-10 is lower than the normative PLF and if CERC norms of 85% plant load factor are followed, the ARR would reduce by Rs 84.09 Crore and reduction in cost of supply would be around 5 paisa/kWh. BSP has added that if PLF achieved during FY 2007-08 is maintained for FY 2009-10, the reduction in ARR and cost of supply would be Rs 39.26 Crore and 2 paisa/kWh respectively.

Petitioner's reply

The majority of power plants of CSPGCL are quite old plants and almost completed or completing their expected operational life. The Petitioner has further submitted that the over efficient operation of such old plants will result into speedy deterioration of the remaining life of the plant and therefore, it is preferred to operate these plants at little lower efficiency of operation to maintain the continuity of supply as far as possible.

2.11 O&M Expenses

BSP has submitted that the computations of O&M expenses as submitted by CSPGCL are not as per CERC Tariff Regulations and tariff regulation does not provide norms of O&M expenses for all sets of thermal power stations such as 50MW sets and 120MW sets. It requested Commission to fix suitable norms in line with CERC regulations to calculate O&M expenses of these units.

Petitioner's reply

The Petitioner has submitted that the CERC Regulations are guiding factor for State Commissions as per provision under Section 61(1) of the Act and it not mandatory for SERCs to follow the same. Most of the power plants in the state are quite old plants and relaxed norms are essential for such plants. For such old and uncommon designed plants no norm for calculating O&M expenses can be followed and hence, projections of O&M expenses for such plants have been made based on the past trends.

2.12 Specific Oil Consumption and Oil Prices

BSP has submitted that the specific oil consumption proposed by CSPGCL for FY 2009-10 is substantially higher as compared to the past trends. BSP has further submitted none of the plants meet normative criteria of specific oil consumption of 1.00 ml/unit as specified by CERC. BSP has suggested that if best of specific oil consumption achieved in last three years is considered for FY10, it will reduce the cost of generation by Rs 20.13 Crore (2 paisa per unit) and if CERC norms are considered the reduction would be Rs 31.67 Crore (3 paisa per unit). BSP has further submitted that the CSPGCL while computing the total fuel costs have considered the secondary fuel oil prices as prevalent in first half of FY 2008-09, however, the secondary fuel oil prices have reduced substantially during second half of FY 2008-09 and the same should be considered by the Commission.

Petitioner's reply

The proposed specific oil consumption of Korba East PH-2 and Korba East PH-3 on higher side as the coal received from the allocated mines is of very poor calorific value and thus often incapable even to sustain the flame in the boiler and may lead to explosion. Hence, to maintain the continuity of the flame, extra oil support is required which leads to higher specific oil consumption.

2.13 Transit and Stacking Losses

BSP has submitted that CSPGCL has not made any significant improvements in reducing the transit and stacking losses. The transit and stacking losses of CSPGCL are quite high as compared to CERC Regulations i.e. 0.2% for Pithead generating stations and 0.8% for Non Pithead generating stations.

Petitioner's reply

The transit and stacking losses of CSPGCL are at the same level since last three years and these cannot be reduced further. The Petitioner has further submitted that the treatment of coal companies with Central Generating Stations is not the same as that with the State owned Generating Stations and it is not appropriate to compare the transit losses of coal received at State Generating Stations with Central Generating Stations.

2.14 Specific Coal Consumption

BSP has submitted that the specific coal consumption of CSPGCL stations is increasing resulting in higher fuel cost. BSP has suggested that if best of specific coal consumption achieved in last three years is considered for FY 10, it will result into saving of Rs 28 Crore.

Petitioner's reply

The Petitioner has submitted that the specific coal consumption at CSPGCL stations is increasing due to poor quality of coal.

2.15 Coal Prices

BSP has submitted that despite reduction in of coal prices in the world market, a substantial increase in coal price in the range of 14-26% as estimated by CSPGCL is not reasonable and needs to be revised by the Commission.

Petitioner's reply

The projection of coal price has been made on the basis of prevailing actual coal prices. The petitioner has further submitted that if the respondent provides information on availability of cheaper coal, the Petitioner will procure the cheaper coal.

2.16 Auxiliary Consumption

BSP has submitted that the proposed auxiliary consumption for most of the stations is higher than CERC norms and if CERC norms are considered for FY 2009-10, it would result in savings of Rs 90.07 Crore.

Petitioner's reply

The Petitioner has submitted that the auxiliary consumption of Korba East Ph-2 is higher than the norms while for remaining plants, it is very close to the norm. The Petitioner has further submitted that the Korba East Ph-2 is an old Russian designed plant for which the auxiliaries designed were of higher capacity than actually required for the capacity of plant, hence the auxiliary consumption of Korba East Ph-2 is higher. The Petitioner has further submitted that higher auxiliary consumption is more economical than replacement of auxiliaries of an old plant.

2.17 Demurrage Charges

Shivam Structural & Steel Rolling Mills has requested information on details of the demurrage charges being paid by the CSPGCL power stations due to non-unloading of coal in time from the coal mines.

Petitioner's reply

The Petitioner has submitted that no demurrage charges have been paid by CSPGCL on account of non unloading of coal from the coal mines.

<u>**Transmission Specific Issues**</u>

2.18 Transmission losses

Several objectors have enquired about the present level of transmission losses and steps taken for reduction of losses. Salasar Steel and Power Limited, Urla Industries Association, Confederation of Indian Industries (CII) and other respondents has submitted that in the tariff order for 2007-08 the Commission has directed erstwhile CSEB to reduce transmission loss to 4.03% for FY 2007-08. The company is required to take action for reducing losses, however, a higher target of 5.01% is considered for calculation of proposed tariff for FY 2009-10. They have further submitted that the computation of losses is done on the basis of assumptions and not actual metering. BSP has submitted that a lower target than 4.03% should be set by the Commission for approving the ARR and Tariff of CSPTCL. This would result in reduction of Rs 37 Crore in ARR and 2 paisa/kWh in cost of supply.

Petitioner's reply

The transmission losses are calculated on the basis of system input to the transmission system of CSPTCL – Sale to EHV consumers and the electricity transferred to distribution system. The losses projected by erstwhile CSEB during previous petitions provisional and thus the Commission has directed CSEB to get a detailed sample study conducted because the transmission losses evaluated were even lower than pooled regional losses where the transmission is undertaken at 220kV and above. CSEB has appointed consultants to carry out voltage wise loss study and the preliminary results of the study indicate that the transmission losses are around 5.5%. Accordingly projections have been made in the petition. The proposal to reduce transmission loss during ensuing year is 0.1%. The proposal for improvement initiatives have been incorporated in the Business Plan submitted to Commission's approval and is available at Company's website: www.cseb.gov.in. The Petitioner has also submitted that the transmission losses for FY 2007-08 are being re-worked and will be submitted to the Commission.

2.19 Issue : O&M expenses:

BSP has submitted that the CERC regulations should be followed while approving O&M expenses of CSPTCL. Rate of inflation of 9% for R&M expenses and 7% for A&G expenses considered by CSPTCL is too high considering downtrend in WPI.

Petitioner's reply

The O&M expenses are calculated in accordance to the actual trend during previous years. Further, with frequently fluctuating rate of inflation, prudent projection cannot be made for a period of one year. The prudent approach is to capture all such variations over a year and make the projections on the basis of average rate over the year. The apportionment of A&G expenses on the basis of network parameters has been done on past experience.

Distribution Specific Issues

2.20 Power Purchase Quantum and Cost

Urla Industries Association has highlighted the need for reassessment of power purchase from Central Stations during FY 09-10 stating that the Centre has revised the quota of the Chhattisgarh State to 664.64 MW from 555.55 MW since March 1, 2009. Chhattisgarh Sponge Iron Manufacturer's Association has suggested that the merit order dispatch criteria should be strictly followed for purchasing the power to ensure least cost procurement approach. Another respondent has requested for justification for projected reduction in purchase of power from captive stations and IPP particularly in FY 09-10 while there is energy deficit in FY 08-09 and FY 09-10.

During the public hearing at Raipur, Mini Steel Plant Association has suggested that CSPDCL should purchase power from CPPs at competitive rates and after adding nominal profit, power should be sold to other consumers or may be to other States.

Urla Industries Association during the public hearing has submitted that a "VCA Formula" should be redesigned by the Commission for the Distribution Company.

Petitioner's reply:

The present allocation from CGS to CSPDCL includes 541 MW from firm allocated quota and 204 MW from unallocated quota. The total allocation is 745 MW. The merit order dispatch has always been followed by the erstwhile CSEB and now by CSPDCL for optimising the power purchase cost. CSPDCL has further submitted that if the power purchase cost of the licensee is increased then the consequential increase in retail tariff shall be inevitable as power purchase is a major contributing factor to the ARR of Distribution licensee. On the issue of reduction in power purchase from CPPs during FY 2009-10, CSPGCL has submitted that though the price of power purchase from CPPs is quite reasonable but the supply is quite inconsistent. However, the average rate for power purchase from CGS is Rs 1.60/unit and the power supply from CGS is reliable and firm as compared to power supplied by CPPs.

2.21 Security Deposits

Urla Industries Association has raised the objection that the CSPDCL has not made any provisions for payment of interest to consumers on their security deposits with CSPDCL in their ARR and tariff petition. Chhattisgarh Mini Steel Plant has also suggested that 9% interest per annum should be paid to the consumers, equivalent to Bank's fixed deposit rates on the security deposit. During the public hearing, Urla

Industries Association has submitted that proper provisions should be made for interest on security deposit in the ARR.

Petitioner's reply

The provision of payment of interest on security deposit of consumers has already been made in Form F-3 of the tariff proposal. The Petitioner has further submitted that there was a calculation mistake which has been corrected from Rs 35 lakh to Rs 24 Crore.

2.22 Distribution loss

Some of the respondents has submitted that considering the huge investment plan proposed by CSPDCL, the distribution losses reduction trajectory proposed by CSPDCL is on lower side. It was suggested to separately provide the LT and HT losses so that burden of losses from LT consumers should not be borne by HT consumers.

Many objectors have enquired about the present level of T&D losses in the State and progress made by erstwhile CSEB on the loss reduction front and asked the following information in this regard:

- Zone wise consumption and loss statement with details of each feeder loss
- Voltage wise area wise and category wise distribution losses
- Steps taken for reduction of losses
- Technical report of consultant appointed to study T&D losses

BPS has submitted that in the tariff order 2007-08 the Commission has directed erstwhile CSEB to reduce distribution losses to 29.71% for FY 2007-08. However, CSPDCL has proposed a higher figure of distribution losses of 35.82% for calculation of proposed tariff. The distribution loss target of lower than 29.71% should be set for calculation purposes for FY 2009-10 and even if 29.71% distribution losses are considered for FY 2009-10, it will result in savings of Rs 190 Crore in ARR and 14 paisa/kWh in average cost of supply.

Petitioners's reply

This is the first time when T&D losses are correctly and reasonably assessed as per preliminary report of appointed consultants on actual consumption pattern of un-metered consumers. Voltage-wise loss study has been undertaken by the appointed consultants and is in process since last one year. The Petitioner has further submitted that the feeder wise loss computation is not possible unless all the interface points are metered. The evaluation of loss at circle level is still at preliminary stage and shall be stabilized after 100% metering of interface points. CSPDCL is planning to achieve 100% metering of all consumer connections by March 2010

2.23 Theft of energy:

Sarda Energy and Minerals Limited has highlighted that revenue loss due to theft of electricity is recovered from the honest consumers by increasing the tariff rates. They have suggested various means by which theft can be reduced including increasing length of HT lines, using underground cables in slum areas, introducing tele-metering system for bulk consumers, strengthening vigilance department of CSPDCL and by providing 100% metering. Urla Industries Association has submitted that separate provision should be made for recovery from theft cases in the ARR itself.

Petitioner's reply

A separate provision is not made for recovery from theft cases as CSPDCL expects all its consumers to be honest. It is proposed to deal with theft cases more strictly and the actual revenue so earned shall be added in the income at the time of truing up of ARR and Revenue.

2.24 BPL and Agriculture consumers

Urla Industries Association has raised objection on proposed addition of 4.5 lakh new BPL consumers and has stated that such target cannot be achieved. Further they have objected on methodology followed by CSPDCL for assessing consumption by BPL consumers and agricultural consumers. They have submitted that no survey/data has been submitted to substantiate the claims made by CSPDCL in this regard. CG Udyog Mahasangh has submitted that subsidy to BPL and Agriculture consumers should be given by State Government. Urla Industries Association has also raised objection on load factor of agriculture pump sets and has stated that load factor proposed in the petition is on higher side as compared to other agriculture rich states like Punjab and Haryana.

Petitioner's reply

The proposal for providing 4.8 lakh new BPL consumers is not erroneous and impracticable. With the target to provide electricity to all households by 2012, CSPDCL has to release even more connections during the coming years. There is no need of preliminary survey for BPL connections as wherever the new electrification is extended the BPL connections can be released immediately and the new electrification work is taken up on war footing by the Central/State Agencies to achieve the target for electricity to all. As per the preliminary results of an ongoing study on line losses and cost-to-serve exercise, the average consumption of BPL category is assessed at 80 units/month/connection.

The sale of energy to BPL consumers has been considered as 30 unit/consumer/month for the year 2006-07 and 2007-08 while for the year 2008-09 during which study has been undertaken by consultants, based on the preliminary results, projections are made on the basis that the average consumption of 60% BPL consumers is 40 units/month/connection and the average consumption of only 40% BPL consumers is 80 units/connection/month. CSPDCL has hence requested the Commission to raise the limit of BPL consumption from 30units/month to 40units/month.

As regards to the projections for increase in agriculture demand, the Petitioner has submitted that the figures in tariff petition are based on the target given by the State Government and actual assessment of demand. CSPDCL has added 1, 00,000 pump connections during last three years. As far as load factor of 25.34% of agriculture pump connections is concerned, it is considered on the basis of preliminary study results of ongoing study on line losses and cost-to-serve exercise.

2.25 Other debits:

BSP has submitted that the CSPDCL has proposed other debits of Rs 44 Crore for FY 2009-10 which indicates an increase of 45% over FY 08. The quantum jump in the other debits needs to be reviewed.

Petitioner's reply

The Regulation for determination of tariff prescribes 1% of revenue provision for bad debts every year. The tariff cannot be determined separately for consumers making prompt payments and for defaulters. The Petitioner has further submitted that CSPDCL has projected the bad debts as per prevailing regulation only.

2.26 Revenue Gap:

BSP has highlighted that the ARR projected by CSPDCL for FY 10 is Rs 4460 Crore and while calculating revenue gap of Rs 825 Crore in the petition. The revenue from sale of power outside the State has not been considered.

Petitioner's reply

The sale of electricity outside the distribution licence area of distribution licensee is the activity other than the distribution function and is termed as trading of electricity. The extra revenue earned out of this trading activity has also been considered to off set the tariff of retail consumers by incorporating it into the non-tariff income into the ARR.

2.27 Increase in Tariff

Several respondents have stated that in the prevalent economic situation of world wide recession and dipping down price index, increase in tariff is not a reasonable proposal. They have highlighted that the WPI inflation index is hovering at around 0.44% presently but the increase in tariff proposed by CSPDCL is around 30% for some of the categories. Ispat India has quoted a different number for All India WPI Index, i.e., 0.27% and highlighted the same issue that 30% increase in tariff is unrealistic. Poha Murmura Nirmata Kalyan Samiti has submitted that the companies are earning huge income and paying heavy taxes and in such circumstances, any tariff increase is not justified.

Mini Steel Plant Association has raised objection regarding tariff increase during the public hearing at Raipur on April 18, 2009. They said that in spite of reduction in the tariffs in the last tariff order for FY 2007-08, erstwhile CSEB has earned huge surplus revenue to the tune of Rs. 700 Crore and this surplus is being mis-utilized by the companies. Several industries have submitted that with proposed increase in tariffs their product will become non-competitive compared to neighbouring State of Orissa. They have also stated that OERC has not allowed any increase in tariff for Mini Steel Plants.

Chhattisgarh Sponge Iron Manufacturer's Association have highlighted adverse impact of tariff hike including closure of units in iron and steel sectors leading to reduction in electricity demand and hence revenue of CSPDCL; increase in unemployment and reduction in industrial growth. They have requested the Commission to reduce the tariffs by 15%, provide load factor incentive on 60% load factor and provide concession for units wanting temporary closure because of market.

Petitioner's reply

The tariff proposal and ARR estimation for FY 2009-10 are arrived at on the basis of actual expenditure trend of few previous years so as to capture all the variations over a longer period of time. With frequently fluctuating rate of inflation, prudent projection cannot be made for a period of one year and the procedure adopted is reasonable and accounts for variations in inflation. The Petitioner has further submitted under Section 65 of the Electricity Act 2003, the State Government may provide subsidy to a particular set of consumers and direct the Commission to reduce their tariff.

2.28 Cross Subsidy and Cross Subsidy Surcharge

Several respondents have emphasised on the issue of cross subsidy. Several respondents including Bhilai Steel Plant highlighted that the increase in energy charges proposed for industries is around 30% while that for domestic consumers is around 13%. Dhamtari Rice Mill (Owners) Association has referred to the tariff policy and requested the Commission that as per the norms laid under the policy, the cross subsidy should not be more than ±20% of the average cost of supply. The average cost of supply as given in the CSPDCL petition is Rs 3.47/unit for FY 09 and Rs 3.60/unit for FY 2009-10 while revenue realisation from industrial consumers is more than +20% of the average cost of supply.

CG Udyog Mahasangh has also raised the issue of cross subsidy during the public hearing at Raipur. Mahasangh referred to the growth in BPL and Agriculture consumers and also increase in energy consumption in the category.

Salasar Steel and Power Limited, Urla Industries Association, CII and other respondents have submitted that the 75% jump in the cross subsidy surcharge is objectionable. They have stated that the cost of supply is projected to increase by 6% while tariff rates are being increased by nearly 33%. Further, they have suggested that the surcharge should be calculated separately for each tariff category customer so that it can reflect the actual cost of supply for the respective category. They have further highlighted that the Commission has approved relief of 50% on the cross subsidy rates for co-generation plants based on WHR from DRI Kilns under Petition 15/2008[M] and the same should be continued in the tariff order.

Petitioner's reply:

The burden of reduction of cross-subsidy is not on the Distribution Licensee and the same has to be ensured by the State Government and the Commission. CSPDCL has made the tariff proposal in the larger interest of common public. The Petitioner has further submitted that there is no mandate regarding category-wise cost of supply and hence the issue of violation of provision related to category-wise cost of supply does not arise.

2.29 Categorisation in Agriculture/Agriculture Allied Services

Chhattisgarh cold storage industry submitted that their connected load is 149 HP and load factor is less than 30% and maximum demand is 50-60% of the contract demand. They requested that as cold storage is used for storing agricultural products, it should be categorised under agriculture allied services category instead of industry category.

Chhattisgarh Krishi Vaniki Samaj has requested for inclusion of tree-crop plantation activity under LV-4 i.e. Agriculture Allied Services Category as this activity includes raising tree crops like Subabul, Eucalyptus, Manzium, Khamhar, Teak and Bamboo and they have submitted that this activity should be included under LV-3 i.e. L.T Agriculture category.

Poha Murmura Nirmata Kalyan Samiti has submitted that since their industry is an agriculture product processing unit, they should be included in the LV-4 i.e. Agriculture Allied Services category.

Petitioner's reply

The issue of covering tree plantation under agriculture category for the purpose of electricity tariff is still not decided by the Appellate Tribunal for Electricity under the appeal filed by Krishi Vaniki Samaj against the Commission's tariff order for the year 2006-07. An issue that is still pending for adjudication at an Appellate Court cannot be considered separately by the subordinate court i.e. Commission until it is disposed off by the Appellate Court.

Further, CSPDCL submitted that the decision on consumer categorisation is under the purview of the Commission.

2.30 Demand Charges of HV-1 Category

A number of the respondents raised the issue of frequent increase in demand charges. Indian Solvent Industries and other respondents have submitted that for Steel Industries tariff the demand charges has been proposed to be raised to Rs 400/ kVA from Rs 310/ kVA, which was raised from Rs 260/ kVA to Rs 310/kVA in October 2007. They compared the charges in Chhattisgarh with that in Orissa, which is Rs 200/- per kVA. They have also submitted that the demand charge levied by Jindal Steel and Power Ltd. to similar industries in Raigarh is 30p on load factor.

Some of the respondents have also raised objection on not having any provisions for reduction in demand due to breakdown maintenance. The demand charges are to be paid irrespective of usage of power which compels industries to run on continuous basis. They have further submitted that even the scheduled/unscheduled power cuts are also not considered while levying the demand charges.

Mini Steel Plant Association has objected an increase in Demand charges and requested for retaining the existing charge.

Chhattisgarh Mini Steel Plant Association has submitted that relaxation should be made in Demand charges for National/State festival holidays and for breakdowns in the industries.

Petitioner's reply

The demand charges are levied to recover the fixed cost of the licensee as the fixed costs has to be incurred by the licensee whether any consumer consumes power or not. The fixed cost of the licensee depends upon various factors/modalities adopted which varies from licensee to licensee and hence cannot be same. Either full fixed cost is recovered through demand charges or partially through demand and energy charges. Earlier, major portion of fixed cost was recovered through energy charge which is gradually being moved to demand charges. In Orissa, the fixed cost component is less due to lower level of electrification and availability of cheaper hydel power. Jindal Steel and Power Ltd. does not have the universal supply obligation and is supplying only to a few industries and hence it will not be appropriate to compare with the tariff levied by Jindal Steel and Power Ltd.

2.31 Energy Charges of HV-1 Category

Ispat India has submitted the comparison of the energy charges proposed by WESCO in the State of Orissa and that by CSPDCL. It has submitted that WESCO has proposed an energy charge of Rs 3.10/unit for consumer with load factor less than 50%; Rs 2.35/unit for load factor between 50% and 60% and Rs 2.30/unit for load factor above 60% and on the other hand, CSPDCL has proposed a flat rate of Rs 3.00/unit which at present is Rs 2.30/unit.

Mini Steel Plant Association has objected the increase in energy charges and has requested for retaining the existing tariff structure and also the existing ToD structure.

Petitioner's reply

The tariff proposal and ARR estimation for FY 2009-10 are arrived at on the basis of actual expenditure trend of few previous years so as to capture all the variations over a longer period of time. The Petitioner further submitted that the increase in tariff proposed is to meet the revenue gap estimated at existing tariffs.

2.32 ToD tariff

Several respondents have objected to the CSPDCL's proposal of modification in TOD tariff and raised an issue as to how the proposed ToD tariff for industries is a deterrent to usage of electricity in the peak hours. One of the objectors said that the proposed

ToD tariff does not provide any discount for usage during off-peak hours but only penalty for usage during peak hours. Further, the CSPDCL in its petition has proposed to change peak hours from 6:00-10:00 pm to 5:00-11:00 pm. Some of the respondents suggested that a rational study should be made for ascertaining the peak period. Some of respondents have submitted that abolishing a discount for usage during off-peak hours is not justified, especially when the Government claims the State to be power surplus.

Urla Industries Association has objected to the CSPDCL's proposal of making ToD tariff compulsory without off-peak incentive to all HT and LT consumers (except Railways) above 50 kW load. Another respondent has compared the proposed ToD tariff with that of WESCO in the State of Orissa which has lower number of peak hours, provides incentive for usage in off-peak hours and there is no penalty for usage during peak hours. Representatives of continuous process industries has submitted that they cannot stop production during peak hours and hence penalty for usage in peak hours should not be imposed on continuous process industries.

BSP has submitted that the proposal is against the basic philosophy of ToD regime suggested under Tariff Policy. Further, being a continuous industry, it is not possible for BSP to cut down its load during peak hours. Hence, it is requested to waive off ToD clause for continuous process industry. BSP has submitted as per the present ToD tariff structure, CSPDCL charges 30% more for consumption during peak period (as per ToD tariff of 2007-08) and has suggested that the surcharge during peak hours should be made at par with the incentive given for usage during off-peak period i.e. 15%.

During the public hearing, Urla Industries Association has submitted that ToD tariff should be continued on optional basis with three time periods with incentives in off-peak (night) hours and additional charges during peak period should be reduced to 15% and incentive during off-peak hours should be increased to 20%. They further suggested that TOD tariff should be made applicable for LT consumers on optional basis.

Petitioner's reply

The proposal to withdraw the incentive during night (off-peak hours) is on the justified ground as the pattern of demand in Chhattisgarh remains active during night hours and as such no off-peak is observed during majority of nights. The purpose of incentivising the demand to shift during night hours is hence defeated and the cost of power during night hours sometime remains even more than that in day hours. The Petitioner has further submitted that the availability of surplus power does not mean that it is free of cost and the market value of electricity varies with the time of requirement.

2.33 Minimum charges for seasonal industries

Some of the industries whose operation is seasonal in nature raised objection on payment of minimum charges for the periods when they do not consume any power. One of the objectors has stated that their industry remains closed from April to October every year due to non-availability of raw materials. Some of the soy nugget manufacturers have also stated that since soybean is a seasonal crop, their industries operate as per the availability of the crop and requested waiver of minimum charges for the months when their factory is not operating. Chhattisgarh State Rice Millers Association has submitted that due to seasonal nature of rice mills, the minimum charges for the period December to May should be fixed at 75% of the normal minimum charges. They have further submitted that the minimum charges should be levied based on annual consumption instead of monthly consumption.

Petitioner's reply

The Petitioner has submitted as it has to incur the fixed expenses irrespective of whether the consumers draw the contracted power or not due to supply obligation. It has to tie up the procurement of power according to the contracted demand of the consumer for which it has to incur some fixed cost. Hence, to maintain continuous availability, it is not possible to provide concession for the periods when a consumer prefers not to use the power. The Petitioner has suggested that if consumers do not require power for some specific period of year they should get their connection disconnected and for such period of temporary disconnection a different tariff may be considered but not in the prevailing conditions.

2.34 Wheeling charges

Salasar Steel and Power Limited, Urla Industries Association, CII and other respondents have objected on the proposed increase in wheeling charges from 15p/unit in 2007-08 to 17p/unit in 2008-09 and 19p/unit in 2009-10. They have submitted that the same is unjustified as distribution losses are to be reduced every year by 3% as per the guidelines laid down by the Government.

Petitioner's reply

The Petitioner submitted that the detailed basis and computations of all the charges has been elaborated in the Petition. The charges are primarily increaseing due to increase in various expenditure heads on account of inflation.

2.35 Meter rent

One of the respondents has raised the issue of pertinent charge for meter rent every month by CSPDCL. The respondent has stated that as per WESCO proposal in the State of Orissa, meter rent is to be charged only till the cost of meter is recovered. Railways has also objected on charging of meter rent on monthly basis at the rate of Rs. 8900/- per month for each Traction Sub-Station. They compared the case with other states where there is very low or no meter rent charge.

Petitioner's reply

The Petitioner submitted that the issue of levying meter rent is under the purview of the Commission.

2.36 Raising limit for LT connections

Poha Murmura Nirmata Kalyan Samiti has submitted that the existing limit of 100HP/75KW for availing LT connections should be increased to 150HP/125KW.

Petitioner's reply

Till some years back, the maximum limit for availing the LT connection under any tariff category was 100 HP only which was increased initially on trial basis up to 150 HP but the results were not encouraging. The preliminary result of voltage-wise loss study revealed that the losses in LT system are to the tune of about 36% which is on the higher side. Therefore restriction of 100 HP limit for demand based tariff LT connection is considered as initiative for improvement losses and proposed accordingly. Besides, this limit of 100 HP/75 kW is already in existence for all other categories of LT connection and hence similarly placed groups must not be discriminated.

2.37 Load Factor Incentive

Chhattisgarh Solvent Extractor's Association and other solvent extraction plants have submitted that during peak season from October to April, the power consumption of solvent extraction plants is optimum and hence the load factor is above 95% of connected load. They have submitted that load factor incentive is applicable for Steel/sponge iron units, however, the solvent/refining industries are not provided with the benefit of load factor incentive. They have requested the Commission to extend the benefit of load factor incentive to Solvent/refining industries also.

Petitioner's reply

CSPDCL is not in the favour of any load factor incentive to be allowed to any class of consumers as it is against the provisions of Electricity Conservation Act. In the situation when the nation is facing an acute shortage of electricity, it is not appropriate to incentivise more consumption.

2.38 Power factor incentive:

BSP has submitted that the tariff proposed by CSPDCL does not mention anything about power factor incentive. BSP has requested to allow incentive to consumers for maintaining high power factor. They have further submitted that the higher power factor results in definite financial advantage to the company in the form of reduced losses and increase in the system capacity to supply power.

Petitioner's reply

CSPDCL has not proposed any alteration in the present provision for PF incentive/penalty. Incentive for better power factor is already there in the tariff. Maintenance of better power factor also benefits to the industry in technical as well as financial terms.

2.39 Parallel operation charges:

Salasar Steel and Power Limited, Urla Industries Associations, CII and other respondents have submitted that the proposed tariff petition does not mention about parallel operation charges and hence it is not clear whether the revenue impact of the charges have been considered in the revenue projections. Further, they have submitted that the Commission has passed an order in this regard in petition 39/2006[M] fixing the rate, manner of calculation and applicability of the same. They expect that this would be included in the tariff order. BSP and Bajrang Power in its objection have stated that parallel operation charges is not being levied as per the latest order of the Commission.

Petitioner's reply

Parallel operation charge is not a part of tariff petition, therefore has not been proposed under the tariff petition.

2.40 Tariff category for Poultry and Dairy consumers

Some of the Poultry and Dairy consumers have submitted that the poultry and dairy consumers who have availed the connection at LT level have been kept under LV 4 category i.e. Agriculture Allied Services, while the poultry and dairy consumers who have availed the connection at HT level have been kept under HV-5 category i.e., As the tariff of consumers under HT category is much higher as compared to LV 4 category, the consumers who have availed the HT connection are not able to compete with poultry and dairy consumers connected at LT level. They have suggested that either the poultry and dairy consumers at HT level should be categorised under LV 4 category or a separate category should be created for such consumers.

Some of the respondents has suggested to include Poultry, dairy & fisheries consumers in LV 3.1 & 3.2 during the public hearing at Raipur.

Petitioner's reply

The decision on consumer categorisation is under the purview of the Commission.

2.41 LV-6 Tariff for Public Utilities & HV-7 Tariff for PWW and Irrigation

Principal Secretary, Urban Administration Development Department, Government of Chhattisgarh (GoCG) has submitted that the work under public utilities are carried out for public welfare and not for the commercial purpose. The increase in tariff proposed by CSPDCL is not appropriate as with the prevailing tariff itself, municipal bodies are bearing losses on payment to the utilities. Similarly they have opposed the increase in tariff in 33 KV and 11 KV categories for PWW and Irrigation. They have requested for reduction in tariff for public bodies by 50 Paise/kWh considering the financial health of the urban local bodies. Municipal Corporation, Raipur has also submitted that the tariff of Public Water Works and Street Lights must not be increased and the existing tariff should be continued.

Petitioner's reply

This is under the purview of the Commission. However, for future of the local bodies to recover the charges from the public should not be burden on the CSPDCL.

2.42 Tariff for Rice Millers

Pramukh Sachiv, Nagrik Aapurti evam Upabhokta Sanrakshan Vibhag and Rice Millers Association have submitted that there should be separate tariff for Rice mills and they should be exempted from minimum monthly charges or minimum charges should be calculated on annul basis. They have further suggested that the Rice mills be placed in LV category with maximum demand of 150 HP.

Petitioner's reply

As stated repeatedly, all LT consumers should be permitted connected load of 100 HP. The reasons of levy of minimum charge has also been naratted elsewhere.

2.43 Start-up Power Tariff

Salasar Steel and Power Limited, Urla Industries Association, CII and other respondents have raised objection on the increase in tariff and applicability of tariff for Start-up power. They have further highlighted that this tariff category is not applicable to those consumers whose generating plants are co-located with industrial load. They have submitted that the consumers whose generating plants are co-located with industrial load should be allowed to be placed in this tariff category. They have clarified that these plants will not be able to draw power for the consumption in industrial unit as the commercial penalties in drawing more than 10% load are severe and are commercially unattractive. Another respondent has submitted that the demand charges for this category should not be increased from Rs 150/kW/month to Rs 200/kW/month. KSK Energy has submitted that as per National Electricity Policy and Tariff Policy, captive generating companies deserve same treatment as OA customers who are eligible for single part tariff. They have also sighted case of TNERC where single part tariff is applicable to generators for Start up power.

Petitioner's reply

This is under the purview of the Commission.

2.44 Terms and Conditions of EHV, HV and HV-8 Tariff

Mahamaya Ispat has highlighted that CSPDCL allows only maximum 10 MVA demand at 33kV category as per tariff schedule for HT Consumers. Their area is not served by 132 kV line and they have to utilize the services of 33kV only. On the other hand, CSERC Grid Code, 2007 allows up to 15MVA power to be injected into Grid at 33kV. They have submitted that the maximum ceiling of 10 MVA may be replaced by 15 MVA on 33kV.

Petitioner's reply

This matter is related to Supply Code.

2.45 Penalty for Excess Drawl:

BSP has submitted that the demand charges for excess demand are proposed to be raised from 1.5 times to 2 times. BSP meets most of its demand from its own CPP and maintains connectivity with State utility as a back up source. BSP has submitted that for such consumers, increase in penal charges is objectionable and suggested creation of a separate category for consumers with CPPs.

Petitioner's reply

The objection on the ground that respondent is a CPP holder is not justified under Section 62(3) of the Act. For the purpose of import of power from licensee all the consumers under a particular category are same. The special dispensations provided to the BSP by erstwhile MPEB were with the intention to extend the scope of initial business but under the new Act, such discrimination is not lawful.

2.46 Metering and Billing

Shree Kumar Menon, Corporator, Raipur Municipal Corporation (RMC) has submitted that poor quality of meters is being used by CSPDCL which record erratic consumptions and this is leading to mistakes in the monthly bills. He has also suggested that CSPDCL should increase bill collection counters. Also staff for timely billing, its collections, and complaints should be increased. Similar objection has also been raised by Mr. Bothra at Jagdalpur.

Petitioner's reply

CSPDCL has set procedures to purchase good quality meters as per the metering regulations of the central Commission. The efforts to extend better services to consumers are also made.

2.47 Quality of Supply

Bastar Chambers of Commerce has raised the issue of quality of supply and has submitted that inspite of tariff hike, consumer facilities are not provided. They have suggested holding public hearing by successor companies of CSEB at least twice a year on the consumer complaints related issues. They have submitted that there is huge increase in customer complaints regarding excessive billing, malfunctioning of meters, low voltages, and release of new connections.

Chamber has also suggested that the uninterrupted power should be supplied to Bastar region in view of naxal menace and break downs. They have further suggested that CSPDCL should provide prior information of power cuts, shutdowns and load shedding.

Petitioner's reply

The Petitioner submitted that the various steps taken have been taken towards improvement in quality of supply in compleiance to the directives issued by the Commission and the details of same have been provided in the tariff petition in the section on Compliance with Directives.

2.48 Discount on Prompt payment

Chhattisgarh Mini Steel Plant Association has submitted that 1% discount should be given on the electricity bill for prompt payments

Petitioner's reply

It is in purview of the Commission. The bill by a consumer is raised after 1.5 months consumption of electricity.

2.49 Objections by Railways

Railways has raised the following specific objections/suggestions

i. Railways (South East Central Railway and East Coast Railway) has submitted that in view of the social services being rendered by the Railways to the country, the tariff applicable to the Railway traction should reflect the cost of supply. They have identified a number of advantages to CSPDCL of having Railways as a consumer including power consumption during night hours, bulk consumer, best pay master and power taken at 220/132 KV lines. They have claimed that Railways is actual customer of TRANSCO and not DISCOM. They have also highlighted that rail transport is the most efficient mode of transport and hence they add to the cause of energy security in the Indian transport sector. They have referred to the much lower tariff charged by Distribution Licensees in Delhi to Delhi Metro Railway Corporation (DMRC). They have submitted that the proposed tariff increase will result in additional burden on Rs 70 Crore annually.

   Petitioner's reply

   All the petitioner companies are also public utilities like railways. Further, railways do have a profit motive as has been submitted by Hon'ble Minister for Railways in the Budget session regarding huge profits earned by railways. Railway is CSPDCL's esteemed and valuable consumers and hence revenue is expected from them and not from BPL and agriculture consumers. TRANSCO is not indulged in supply business. Tariff rates of one state can not be compared with other state.

ii. **Cogeneration of electrical energy:** Railways has submitted that the three phase locomotives introduced have features of regeneration braking which enables their rolling stocks to work as generator by converting kinetic energy into electrical energy. They have submitted that though it is kinetic energy, it is more akin to cogeneration. They have further submitted that the electric traction is more energy efficient which helps in reduction of GHG emissions. They have submitted that considering their contribution in cogeneration through their three phase locomotives and reduction in GHG emissions, tariff relief must be provided to railways.

Petitioner's reply

No comments as it is a fact.

iii. **Constitutional requirements:** Article 287 of Constitution stipulates *"the price of electricity sold to...operation of any Railway, shall be less by the amount of the tax than the price charged to other consumers as a substantial quantity of electricity"*. They have submitted that the spirit of the Constitution is that unduly high charges should not be charged to Railways and the tariff for Railways should not be higher than the other HT consumers. The tariff being charged by CSPDCL to Railways is violation of the Constitution as the tariff charged to Railways is higher than the Steel Industries.

Petitioner's reply

The constitutional requirement has already been complied with as electricity duty or cess is not imposed to the railways unlike other HT consumers. In fact the Commission has reduced the tariff of railway traction in its last tariff orders by way of reducing minimum charge and conversion of kWh based tariff to kVAh.

iv. **Tariff Policy:** Railways quoted the Section 5.3(i) of Tariff Policy which stipulates as follows: *"Tariff fixation for all electricity projects (Generation transmission and distribution) that result in lower Green House Gas (GHG) emissions than the relevant base line should take into account the benefits obtained from the Clean Development Mechanism (CDM) into consideration, in a manner so as to provide adequate incentive to the project developers"*. Railways have requested the Commission to pass benefit for Electric Traction in line with above provisions of Tariff Policy as the consumption of Railways is energy efficient and it is almost pollution free. Further, they have suggested that the new Electrification projects must get concessional tariff so as to contribute for Energy independence and lower GHG emissions. They have also submitted that MPERC and RERC have given concessional tariff to new Electrification projects in this regard.

Petitioner's reply

The tariff determiantion is under the purview of the Commission.

v. **Ideal tariff:** The railway's passenger fares have gone up only 16 times as against WPI which has increased 24 times from 1950-51 to 2004-05 indicating subsidized fare structure. On the other hand, the tariff structure for railway traction has gone many more times than what WPI indicates. The increase in traction tariff should be in line with general price rise, based on Wholesale Price Index (WPI)

Petitioner's reply

The tariff determiantion is under the purview of the Commission.

vi. **Demand charges:** Increase of demand charges is objectionable as the existing charges are already much higher than adjoining states like Orissa, WB and UP. It is requested to reduce the demand charges.

Petitioner's reply

Quantum of demand charge depends on the fixed cost allocation in the ARR. Besides, some of the Commissions preferred to allow recovery of fixed cost partially through demand charge and partially through energy charge. Under such circumstances, the demand charges shall be low and energy charges will be on higher side.

vii. **Recording of maximum demand:** CSPDCL is presently charging @ Rs 300/kVA/month as demand charges for traction with 15 minutes integration period and 5 minutes sliding window type while in other States, 15 minutes integration period and 30 minutes with block type window is adopted. It is requested to implement the later scheme by CSPDCL as well. Railways take three phase supply from CSPDCL and convert it to single phase. For achieving this, railways incur heavy expenditure by providing Scott-connected transformers, running three-phase line along the track and adjacent TSSs are fed from different phases and neutral sections are provided at considerable cost between adjacent traction substations. The voltage unbalance between different phases of the grid is strictly maintained within permissible limit. Railways take supply from CSPDCL at various load points and sometimes maximum demand may burst for one feeding zone due to uncontrollable factors. Railways should not be penalised on such account.

Petitioner's reply

The integration period of 15 minutes and sliding window principle are commonly adopted by majority of utilities because for reflecting actual demands, may be for small durations, the integration period must be as low as possible. Accordingly, some advanced countries have further reduced integration period. CSPDCL is supplying electricity to its all major consumers with metering system of 15 minutes integration period and sliding windows modalities. Reverting back to the old system shall be the backward step for improvement.

viii. **Energy charges:** There is a discrepancy in the unit of energy charges mentioned in the petition. In the petition, the tariff is mentioned as Rs 3.40/unit but not clearly mentioned weather it is on kWh or kVAH basis. The existing tariff is Rs 2.60/KVAH which is very high in comparison to the energy charges in other States which is based on kWh. It is highlighted that the CSERC in its previous tariff orders have reduced the energy charges by 5 paisa in FY 2006-07 and 15 paisa in FY 2007-08, while CSPDCL is proposing an increase of 80 paise/KVAH which is unrealistic. This would adversely affect the financial health of railways and would affect the national economy if this burden is transferred to public.

Petitioner's reply

The proposed rate is on KVAH basis for Railways. The energy charge of each utility shall be different depending upon their incurred cost and operational efficiencies.

ix. **Cost of traction supply:** As per CSPDCL petition, the cost of supply including all losses is Rs 3.47/- per unit. Considering the fact the Railway Traction is served at 132 kV, only transmission losses should be taken into account. Railways have demonstrated through back calculation that the cost of supply for railway traction should be Rs 3.13/unit. Railways have further suggested that the tariff charges for Railways should be set at NTPC generation cost plus wheeling charges.

Petitioner's reply

The Commission sets tariff in a scientific manner and procedure suggested by Railways is not fair.

x. **Reduction in cross subsidy:** Railways have emphasised on the issue of cross subsidy is made referring to the Electricity Act 2003, National Electricity Policy and Tariff Policy. They have highlighted that the cross subsidy surcharge was reduced from Rs 1.04/kWh in 2006-07 to Rs 0.87/kWh in 2007-08 by the Commission. CSPDCL has now proposed a cross subsidy surcharge of Rs 1.15/kWh. Further, the new tariff for railways is much beyond +20% of cost of supply as against the limit allowed in the tariff policy. CSPDCL should submit a roadmap to reduce the cross subsidy to 20% by 2010-11.

Petitioner's reply

The burden of reduction of cross subsidy is mainly on the Government and the efforts are in line. Further, the word elimination does not exist in the statute anymore. However, reduction of cross-subsidy is indeed there which has to be achieved gradually. This is an issue to be addressed by the Commission. The cross subsidy is always calculated in reference to the average cost of supply and whatever may be the average cost of supply, the level of cross subsidy is determined on the basis of allocated cost above/below the average cost of supply. Therefore reduction of cross-subsidy does not necessarily mean reduction in tariff.

xi. **kVAh based single part tariff:** Railways has submitted that the traction load is not constant and varies from time to time depending on train movement over the total feed zones fed from the same feeder line, the demand remaining nearly constant and in real sense there is no shoot up in maximum demand as the demand on the grid remains the same. Hence KWh/kVAh based single part tariff is preferred for Railway Traction similar to other States like Andhra Pradesh where such tariff is adopted.

Petitioner's reply

Tariff design is the prerogative of the Commission. However, the Tariff Policy mandates that tariff must be two-part tariff so as to ensure the recovery of fixed cost of the licensees. It is not appropriate to compare rates with other states.

xii. **Adoption of Simultaneous Maximum Demand for Billing:** Railways have objected to the CSPDCL's rationale for low load factor of about 30-45% for individual sub-stations for charging higher tariff. They have submitted that if two traction sub-stations are considered together the load factor is more than 50% and if 5 to 6 traction sub-stations are considered together the load factor is more than 70%. Hence the load factor at transmission network is more than 70% even during the night hours. Railways have suggested that instead of providing individual meters for each sub-station, CSPDCL should provide meters at the grid point, where they feed number of sub-stations. They referred to a similar arrangement approved by Rajasthan Electricity Regulatory Commission (RERC) in which RERC has mentioned that the billable demand shall be simultaneous maximum demand and CEA letter that advised that the billable demand for traction loads should be the simultaneous maximum demand registered by the continuous sub-stations of a given section falling within the jurisdiction of the state and not the sum of individual demands.

Petitioner's reply

CSPDCL has no objection if Railway prefers to avail power supply from it at one point. In that case, demand recorded at the point of supply shall be the actual demand.

xiii. **Penalty for Violation of Contract demand:** Due to a variety of unprecedented reasons, maximum demand may exceed contract demand for a short period of time on individual sub-stations against which CSPDCL collects huge penalty towards maximum demand and energy. However, the overall demand on supplier's grid sub-stations remains the same. Referring to OERC, UPERC and APERC orders, they have requested that the relaxation should be provided to Railway traction for exceeding contract demand. They have submitted that the Commission in its previous tariff order revised the penalty provisions from 2 times to 1.5 times the normal tariff, however, CSPDCL has again requested to restore the penalty to 2 times the normal tariff. They have requested the Commission to provide some cushion in contract demand and reducing penalty for violation of contract demand from 2 times the normal tariff. They have also raised objection on imposing the penalty on energy charges.

Petitioner's reply

The provisions for violation cannot be different for different set of consumers. Railways can exercise better control in limiting the demand within contracted limits by regulating the Railway Traffic or may increase the contract demand, if required. CSPDCL cannot allow its consumers to draw power to any extent as and when required as it is difficult to plan with uncertain requirements of consumers. Further, penalty is not imposed for earning the revenue but is aimed to effectively impose the restriction, which is necessary. The proposal of penalty of two times for undue increase in demand beyond CD is to align with the provisions under Section 126 of the Act.

xiv. **Metering Technique for Power Factor:** Railways have objected on the lag + lead logic for metering technique used for recording power factor. They have submitted that they are getting penalized for both leading and lagging power factor as the changed metering technique is resulting in recording of low power factor thereby recording more KVAh consumption. They have submitted that the MPERC in its tariff order for FY 2008-09 have changed the metering technique and mention that “For the determination of power factor, only lag logic shall be used and no power factor penalty shall be levied, if leading power factor is recorded”. They have further submitted that the capacitors fixed by Railways during no load conditions are supplying reactive power at higher voltage side and not creating any problem in the system and on the contrary it improves the voltage and hence if Railways system is operating at leading PF, CSPDCL should not have any problem and in fact they should feel happy that they are getting reactive power free of cost. In view of the above, they have requested the Commission for reverting back to lag logic only for recording the power factor.

Petitioner’s reply

As per provision under Section 55(2) of the Act, CEA has prescribed standard metering specifications for different type of metering. The proposal of Railways is not commensurate with CEA’s specifications.

xv. **Standby feeder maintenance charges:** Railways have requested for waiver of standby feeder maintenance charges for Railway Traction as the supply from CSPDCL is not reliable. Railways have further mentioned that the actual cost of transmission lines and towers for feeders for which standby charges are being levied was borne by Railways only and hence recovering standby charges for feeders whose original cost was borne by Railways is not justified. Railways have also cited that MPERC in its tariff order 2008-09 for Railway Traction category mentioned that the dedicated feeder maintenance charges shall not be applicable.

Petitioner’s reply

No Comments were offered.

xvi. **Delayed Payment Surcharge:** Railways have suggested that the delayed payment surcharge should be made applicable from the due date only and not from the date of billing. Further, they have also suggested that in case timely refund is not made to railways, similar delayed payment surcharge should be payable by CSPDCL to Railways.

CSPDCL’s reply

The billed amount becomes due on the date on which bill is raised, therefore, the surcharge is also enforced from the date of issue of bill itself in line with the decision of Hon’ble ATE. However, for the convenience of consumers, 15 days notice is allowed under the Act to pay the bill without surcharge beyond which the surcharge is payable.

xvii. **Incentive on early payment:** Railways have suggested that an **i**ncentive on early payment of traction energy bills within 3 days from the receipt of the bill should be introduced, as implemented by OERC and other Electricity Regulatory Commissions

Petitioner's reply

This is in purview of the Commission.

xviii. **Non-traction tariff:** Railways have objected that the tariff for non-traction load is being charged at the rate of Railway Traction. The non-traction load includes residential colony of railway staff including hospitals, schools, street light etc. apart from platforms, workshops and loco-sheds. The rates for residential colony should be in accordance with LT domestic consumers.

Petitioner's reply

They have claimed that railways are maintaining the non-traction load and if CSEB had to maintain the supply to these consumers, their average cost per unit would further increase.

3 CHHATTISGARH STATE POWER GENERATING COMPANY (CSPGCL): ARR AND TARIFF (Petition No.-10/2009(T))

3.1 About Company

Government of Chhattisgarh (GoCG) vide notification No. 1-8/2008/13/1 dated December 19, 2008 issued the Chhattisgarh State Electricity Board Transfer Scheme Rules, 2008 which with effect from January 1, 2009. As per the rules, the erstwhile CSEB has been unbundled into five independent companies viz., Holding company, Generation company, Transmission company, Distribution company and Trading company. Chhattisgarh State Power Generation Company Limited (CSPGCL) is responsible for operating and maintaining the State Generating Stations and also for installation of new power projects. The assets and liabilities of erstwhile CSEB are not yet allocated to the successor companies. Therefore the performance of the company discussed below relates to the generation function of the erstwhile CSEB.

3.2 Past Operational and Financial Performance of CSPGCL

The past operational performance of two years i.e., FY 2006-07 and FY 2007-08 is disucssed below. As the petitioner has filed the petition for FY 2008-09 and FY 2009-10, the Commission has discussed the actual performance during FY 2008-09 while analysing the various elements of ARR for FY 2009-10 in Section 3.4 of this order.

3.2.1 Installed Capacity

CSPGCL has a total installed capacity of 1923.85 MW, comprising 1780 MW thermal, 6 MW of co-generation and 137.65 MW hydro generations. The company has added 500 MW of thermal generation capacity by commissioning two new unit of 250 MW at Korba East Extension in FY 2007-08.

The details of the plants and their installed capacity are provided in the table below:

Table 3.1

Installed Capacity (MW)

	Name of Plant	Date of Commissioning	FY 2006-07 (Total)	FY 2007-08 (Total)
Thermal	Korba East TPS PH 2, 4 units (50MW each)	U1- Sep, 1966	200	200
		U2- May, 1967		
		U3- March, 1968		
		U4- Oct, 1968		
	Korba East TPS PH 3, 2 units (120 MW each)	U1- April, 1976	240	240
		U2- April, 1981		
	Korba East Extn (500 MW)	U1- Oct 21, 2007	-	250
		U2- Mar 20, 2008	-	250
	Korba West TPS, 4 units of (210 MW each)	U1- June, 1983	840	840
		U2- March, 1984		
		U3- March, 1985		
		U4- March, 1986		
	Total (Thermal)		**1280**	**1780**
Hydro	Hasdeo Bango HEP, 3 units (40 MW each)	U1- March, 1994	120	120
		U2- Nov, 1994		
		U3- Jan, 1995		
	Gangrel HEP, 4 units (2.5 MW each)	U1- Apr, 2004	10	10
		U2- June, 2004		
		U3- Oct, 2004		
		U4- Nov, 2004		
	Mini Micro H.P.S Korba, 1 unit (0.85 MW each)	Jan, 2003	0.85	0.85
	Sikasar HEP, 2 units of (3.5 MW each)	Sep, 2006	7	7
	Total (Hydro)		**137.85**	**137.85**
Cogeneration	Kawardha Cogen Plant, 1 unit (6 MW)	Aug, 2006	6	6
	Total (Cogeneration)		**6**	**6**
Total Installed Capacity			**1423.85**	**1923.85**

3.2.2 Capacity Addition

The capacity added by CSPGCL, (erstwhile CSEB) during the Xth Five Year Plan and till the end of FY 2008-09, is as follows:

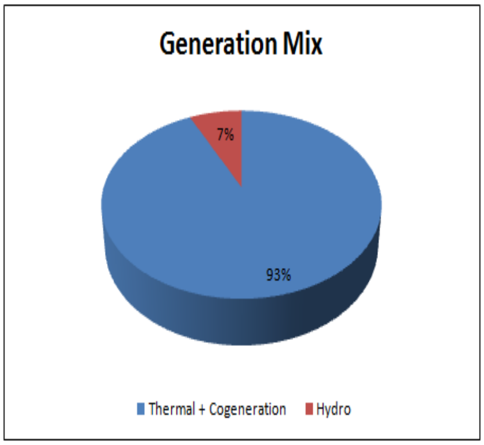
i. Mini Hydel power station, Korba - 0.85 MW

ii. Gangrel HEP - 10 MW (4X2.5 MW)

iii. Kawardha Co-generation plant - 6MW

iv. Sikasar Hydel project - 7 MW (2X3.5 MW)
v. Korba East Extension - 500 MW (2X250 MW)

The first unit of Korba East Extension (thermal) 500 MW (2X250MW) was synchronized on March 30, 2007 and second unit on December 11, 2007.



After the installation of two new units of Korba East Extension and one unit of mini micro HPS, the thermal-hydel ratio of CSPGCL has become 93:7. This is far from the ideal ratio of 60:40 and is highly unfavourable so far as load management is concerned. **There is an urgent need to increase hydel capacity in the State, which will help in meeting peak demand requirements**. Higher the peak loads, CSPGCL will be forced to either restrict demand or procure costly power to meet the shortfall.

The generation capacity of the CSPGCL is expected to increase substantially in the XIth Five Year Plan period with the following projects on the anvil:

Table 3.2
List of New Projects

Plant	Capacity (MW)	Remarks
Korba West Extension (Thermal)	500 (1X500)	Pit Head Station
Marwa (Thermal)	1000 (2X500)	
Korba South (Thermal)	1000 (2X500)	
IFFCO Sarguja Joint Venture (Thermal)	1320 (2X660)	
Matnar Hydel (Hydro)	60 (3X20)	
Bodghat Hydel (Hydro)	500 (4X125)	
Mini H.P.S Korba Hydel (Hydro)	0.85 (1X0.85)	

3.2.3 Plant Load Factor (PLF) and Availability

The details of PLF and availability for CSPGCL's thermal stations are given in the table below:

Table 3.3

Plant Load Factor of Thermal Stations

Power Station		FY 2006-07 (Actual)	FY 2007-08 (Approved)	FY 2007-08 (Actual)
	Korba East PH 2	92.66%	86.55%	87.13%
	Korba East PH 3	78.95%	80.32%	79.36%
	Korba West	80.78%	78.17%	82.50%
	Korba East Extension	-	-	50.44%*

** Due to part year of operation*

Table 3.4

Availability of Thermal Stations

Power Station		FY 2006-07 (Actual)	FY 2007-08 (Actual)
	Korba East PH 2	94.16%	91.19%
	Korba East PH 3	88.14%	88.32%
	Korba West	88.61%	87.83%
	Korba East Extension	-	-

Considering the vintage of the units, these units have performed well in terms of availability and PLF. During FY 2007-08, the actual PLF of Korba West and Korba East II is higher than the PLF approved in the order for FY 2007-08. In case of Korba East III though the PLF achieved during FY 2007-08 is marginally less than the approved PLF, however, the PLF achieved is higher than the PLF achieved during FY 2005-06 and FY 2006-07.

3.2.4 Operational Performance of Thermal and Hydel Plants

The operational performance of thermal stations of CSPGCL during FY 2006-07 and FY 2007-08 is as under:

Table 3.5

Thermal Stations (Korba East II and III)

Particulars	Units	Korba East Phase II (200 MW)			Korba East Phase III (240 MW)		
		FY 2006-07 Actual	FY 2007-08 Approved	FY 2007-08 Actual	FY 2006-07 Actual	FY 2007-08 Approved	FY 2007-08 Actual
Availability Factor	%	94.16%	-	91.19%	88.14%	-	88.32%
Plant Load Factor	%	92.66%	86.55%	87.13%	78.95%	80.32%	79.35%
Auxiliary Consumption	%	10.16%	10.00%	10.80%	8.48%	8.98%	8.47%
Station Heat Rate	K c al/ k W h	2,942	2780	2976	2,639	2600	2700
Sp. Oil Consumption	M l/kW h	1.2	1.5	1.291	1.48	1.5	1.525
Calorific Value of Coal	Kcal/kg	3,390	3400	3262	3,390	3400	3262
Calorific Value of Oil	K c al/L	10,000	10000	10000	10,000	10000	10000
Price of Coal	Rs. per Tonne	595	607	658	595	607	658
Price of Oil	Rs. /K L	20,111	22825	22938	21,451	24166	23981
Specific Coal Consumption	kg/kW h	0.86	0.82	0.91	0.77	0.77	0.83
Gross Generation	MU	1,623	1520.51	1531	1,660	1693.27	1673
Auxiliary Consumption	MU	165	152.05	165	141	152.06	141
Net Generation	MU	1,458	1368.46	1365	1,519	1541.22	1531
Coal Consumption	Lakh Tons	14.24	12.52	14.1	13.04	12.87	13.9
Oil Consumption	KL	1,951	2281	1976	2,452	2540	2543
Coal Cost	Rs. Cr	84.69	76.00	93.03	77.55	79.18	92.71
Oil Cost	Rs. Cr	3.92	5.21	4.53	5.26	6.14	6.12
Other Fuel related costs	Rs. Cr	5.83	-	9.39	5.96	-	7.71
Total Variable Cost	Rs. Cr	94.44	81.21	106.96	88.77	85.31	105.98
Variable Cost/ Unit Gross	Paise /U	58	53	70	53	50	63
Variable Cost/ Unit Net	Paise /U	65	59	79	58	55	70

Table 3.6

Thermal Stations (Korba West and Korba East Ext.)

Particulars	Units	Korba West (840 MW)			Korba East Extension (500 MW)		
		FY 2006-07	FY 2007-08	FY 2007-08	FY 2006-07	FY 2007-08	FY 2007-08
		Actual	Approved	Actual	Actual	Approved (Post CoD)	Actual
Availability Factor	%	88.61%	-	87.83%		-	-
Plant Load Factor	%	80.78%	78.17%	82.49%		80.00%	50.44%
Auxiliary Consumption	%	9.37%	9.45%	9.17%		9.00%	7.53%
Station Heat Rate	K c al/ k W h	2,783	2575	2801		2500	2816
Sp. Oil Consumption	M l/kW h	1.27	1.5	1.136		2.00	16.59
Calorific Value of Coal	Kcal/kg	3,698	3700	3647		3400	3833
Calorific Value of Oil	K c al/L	10,000	10000	10000		10000	10000
Price of Coal	Rs. per Tonne	603	635	648		607	771
Price of Oil	Rs. /K L	23,845	24166	22095		24837	34343
Specific Coal Consumption	kg/kW h	0.75	0.70	0.77		0.74	0.73
Gross Generation	MU	5,944	5767.82	6086	-	1204.92	774
Auxiliary Consumption	MU	557	545.06	558		108.9	58
Net Generation	MU	5,387	5222.76	5529		1096.02	716
Coal Consumption	Lakh Tons	44.79	39.91	46.8		8.94	5.44
Oil Consumption	KL	7,567	8652	6915		2877.00	12845.19
Coal Cost	Rs. Cr	270.08	254.45	302.43		54.28	41.97
Oil Cost	Rs. Cr	18.04	20.91	15.28		7.05	44.11
Other Fuel related costs	Rs. Cr	19.72	-	29.97		-	7.06
Total Variable Cost	Rs. Cr	307.84	275.36	347.68		61.33	93.15
Variable Cost/ Unit Gross	Paise /U	52	48	57		50	120
Variable Cost/ Unit Net	Paise /U	57	53	63		55	130

During FY 2007-08, the actual **auxiliary consumption** of Korba West and Korba East III is lower than the auxiliary consumption approved in the tariff order for FY 2007-08. While for Korba East II, the actual auxiliary consumption during FY 2007-08 is substantially higher than the auxiliary consumption approved in the order for FY 2007-08. For Korba East II, CSPGCL has submitted that the auxiliary consumption is higher because of small size of units, Russian design of units and quality of coal.

The actual **Station Heat Rate (SHR)** of all the stations during FY 2007-08 is higher than the station heat rate approved in the tariff order for FY 2007-08. CSPGCL has submitted that the station heat rate of all the stations has increased due to vintage and poor quality of coal.

The Commission has analysed the performance parameters of each generation station for FY 2007-08 along with reasons submitted by CSPGCL in section 3.4 of this order.

State Hydel Stations:

The actual past performance of the hydro stations, as submitted in the petition, is elaborated in the table below:

Table 3.7

Operational Performance of Hydel Stations

Power Station		Installed Capacity (MW) (Total)	FY 2006-07 (Actual)	FY 2007-08 (Approved)	FY 2007-08 (Actual)
Gross MU	Hasdeo Bango	120.00	358.57	358.71	221.51
	Gangrel	10.00	27.25	27.25	33.84
	Mini Micro H.P.S Korba (W)	0.85	6.91	6.91	6.19
	Sikasar Hydel	7.00	5.97	18	9.52
	Total Hydro	**137.85**	**365.48**	**410.87**	**271.06**
Aux	Hasdeo Bango	120.00	0.38%	0.38%	0.56%
	Gangrel	10.00	4.55%	4.55%	1.31%
	Mini Micro H.P.S Korba (W)	0.85	0.50%	0.50%	1.00%
	Sikasar Hydel	7.00	0.5%	0.50%	5.11%
	Total Hydro	**137.85**	**0.67%**	**0.82%**	**0.82%**
Net MU	Hasdeo Bango	120.00	357.35	357.35	220.27
	Gangrel	10.00	26.01	26.01	33.4
	Mini Micro H.P.S Korba (W)	0.85	6.88	6.88	6.13
	Sikasar Hydel	7.00	5.94	17.91	9.03
	Total Hydro	**137.85**	**364.23**	**408.14**	**268.83**

The reduction in actual gross generation in FY 2007-08 is primarily due to reduction in gross generation from Sikasar and Hasdeo Bango hydel generating stations. CSPGCL has submitted that the Sikasar hydel generating station is multipurpose plant and the control over water discharge is with the State Government and hence the non availability of water for generation is beyond the control of CSPGCL. The gross generation from Gangrel hydel generating station is more than the approved generation for FY 2007-08.

The actual past performance of the Kawardha cogeneration station, as submitted in the petition, is elaborated in the table below:

Table 3.8

Operational Performance of Kawardha Cogeneration Stations

Power Station	FY 2006-07 (Actual)	FY 2007-08 (Approved)	FY 2007-08 (Actual)
Capacity (MW)	6	6	6
Gross Generation (MU)	2.71	24.27	5.63
Aux. Consumption (%)	9.00%	8.9%	31.88%
Net Generation (MU)	2.47	22.11	3.83

The actual Auxiliary Consumption of Kawardha cogeneration plant in FY 2006-07 was 9% which has increased to 31.88% in FY 2007-08. CSPGCL has submitted that the generation from Kawardha Cogeneration Plant could not be raised to the desired level due to unavailability of fuel stock (bagasse and rice husk), which is an uncontrollable factor for CSPGCL which resulted in high auxiliary power consumption. Further, the auxiliaries have to be run for steam generation also. However, the cost of such auxiliaries running has been already covered through sale of steam. Thus the auxiliary consumption reported by CSPGCL is not the actual auxiliary consumption of the Power Plant as such, as it also includes the power consumed by auxiliaries to generate steam. However, CSPGCL could not specifically submit the details of power consumed by auxiliaries to generate steam.

3.3 Tariff Filing and Technical Validation

As discussed in section 1 of this order CSPGCL filed the ARR for FY 2008-09 and FY 2009-10, tariff petition for FY 2009-10 and provisional true up for FY 2007-08 on January 22, 2009. Based on the discrepancies identified by the Commission, CSPGCL has submitted the corrected copy of the ARR and tariff petition on February 26, 2009 which was admitted by the Commission and was registered as Petition No. 10/2009 (T) on February 28, 2009.

A technical validation session was held on March 05, 2009 and another discussion on April 8, 2009 which was attended by the staff of the Commission, officers of CSPGCL, and consultants of both CSPGCL and the Commission. During the discussions, CSPGCL was advised to furnish additional data, which were considered material for examination of the ARR and tariff, such as:

i) Actual data with respect to O&M expenses and capital expenditure for the nine months of FY 2008-09 i.e., from April, 2008 – December, 2008
ii) Actual data with respect to operational parameters and fuel expenses for the FY 2008-09.
iii) Copies of Coal bills and Fuel bills for latest 3 months i.e. December 2008, January 2009 and February 2009.
iv) Month-wise and Station-wise fuel cost and calorific value statement for each fuel utilised at power station for the period April, 2008 to February, 2009.
v) Design Parameters as guaranteed by manufacturers and PG test report towards operational performance parameters such as Station Heat Rate (Turbine Heat Rate and Boiler Efficiency), Auxiliary Consumption etc. for Korba East Extension, Korba East existing station after Renovation & Modernization.
vi) Unit wise Planned Outage for CSPGCL's Generating Stations for FY 2009-10 specifying the details of the outages.
vii) Justification for lower generation from Gangrel HEP in FY 2009-10 as compared to generation during FY 2008-09.
viii) Justification for higher Auxiliary Consumption for Kawardha Cogeneration Plant for FY 2007-08.
ix) Reasons for non consideration of revenue from sale of steam from Kawardha Cogeneration Plant for FY 2008-09 and FY 2009-10.
x) Justification for higher auxiliary consumption of Korba East II during FY 2008-09 and FY 2009-10.
xi) Unit wise performance parameters of Korba East Extension Power plant prior to COD and post COD and justification towards 16.58 ml/kWh of Specific Oil Consumption for Pre CoD period of Unit I of Korba East Extension Generating Station.
xii) Reasons for high HSD consumption in Korba West and Korba East Extension for the period of April 2008 to January 2009.
xiii) Preparedness for executing proposed capital expenditure in new projects in FY 2009-10 i.e. Korba West, Korba South and Marwa and revised phasing of expenditure for Korba West and Marwa Generating Project due to change in project schedule.

xiv) Copy of RLA study for Renovation & Modernization of Korba West Generating Station.

xv) Cost benefit analysis in terms of improvement in performance parameters after Renovation & Modernisation justifying investments in R&M works.

xvi) Details of Capital (O&M) expenses of Rs. 194.83 Crore in FY 2009-10 and also the nature of expense and reasons for not considering such expense in O&M.

xvii) Provisional Accounts of CSEB for FY 2007-08.

xviii) Details of cadre wise number of employees in Form F 5 a.

xix) Actuarial Valuation Report for terminal benefits of employees and Documentary proof of the amount deposited for Pension & Gratuity during FY 2007-08.

xx) Re-examination of other allowances under employee expenses and submit the revised employee expenses.

xxi) Reconciliation of DA percentage as 54% for FY 2008-09 and 66% for FY 2009-10, as CSPGCL has shown different values in the petition.

xxii) Information with respect to pension and gratuity fund of erstwhile CSEB

- Year wise amount invested in Terminal Benefits fund till FY 2008-09
- Total corpus available in Terminal Benefits fund as on March 31, 2009
- Income earned from Terminal Benefits fund
- Year wise terminal benefits liability met from Terminal Benefits Fund
- Terminal Benefits expenses considered separately for meeting the expenses outgo in FY 2007-08 and FY 2008-09

xxiii) Basis of considering 9% increase in A&G expenses from FY 2006-07 till FY 2008-09 along with supporting documents.

xxiv) Basis of considering 7% inflation for projecting A&G expenses for FY 2009-10 based on actual WPI and CPI inflation.

xxv) Justification for vast variation in A&G expenses capitalised for FY 2006-07 and FY 2007-08 to FY 2009-10.

xxvi) 3 years actual R&M expenses i.e. for FY 2005-06, FY 2006-07 and FY 2007-08.

xxvii) Scheme wise break up of GFA addition and details of capitalization for O&M and civil works.

xxviii) Soft copy of asset class wise depreciation computations for FY 2007-08, FY 2008-09 and FY 2009-10

xxix) Allocation of loans amongst G, T and D function and reconciliation of source wise closing balance of loan for FY 2007-08 apportioned to Generation Business in the allocation statement with the details provided in interest computations for Generation Business.

xxx) Re-computation of the reasonable return for FY 2007-08 on account of error in capital liabilities and payment due on capital liabilities.

xxxi) Reasons for charging Income Tax for FY 2008-09 and FY 2009-10 when Post Tax ROE of 17.48% has been considered.

xxxii) Supporting documents in the form of Income Tax Challans for Actual Income Tax paid during FY 2007-08 and Advance Income Tax paid during FY 2008-09.

xxxiii) Long term Power Purchase Agreement or Memorandum of Understanding for supply of power from existing generating stations to CSPDCL.

xxxiv) Power Purchase Agreement or Memorandum of Understanding for supply of entire power from new generating stations to CSPDCL.

3.4 Annual Revenue Requirement (ARR) of CSPGCL for FY 2009-10

3.4.1 Performance Parameters of the Generating Stations

CSPGCL has projected performance for FY 2008-09, FY 2009-10 for the thermal, hydel and co-generating stations and has also submitted the maintenance plan for its thermal units for FY 2008-09 and FY 2009-10.

The performance parameters of the stations as considered by CSPGCL in its petition, and as approved by the Commission for FY 2009-10, are discussed below:

A) Plant Load Factor (PLF) of thermal stations

CSPGCL has projected PLF for FY 2009-10, for all existing thermal stations. The actual PLF for FY 2006-07, PLF approved by the Commission for FY 2007-08, actual PLF for FY 2007-08, FY 2008-09 and PLF projected by CSPGCL FY 2008-09 and FY 2009-10 is given in the table below:

Table 3.9

Plant Load Factor (PLF) submitted by CSPGCL

Power Station	FY 2006-07 (Actual)	Approved by the Commission for FY 2007-08	FY 2007-08 (Actual)	FY 2008-09 (Petition)	FY 2008-09 (Actual)	FY 2009-10 (Petition)
Korba West Power House	80.78%	78.17%	82.50%	83.00%	86.76%	80.00%
Korba East Power House-II	92.66%	86.55%	87.13%	80.00%	82.47%	80.00%
Korba East Power House-III	78.95%	80.32%	79.36%	78.00%	79.31%	78.00%
Korba East Extension		80.00%		81.00%	91.67%	82.50%

As may be observed from the above table, CSPGCL has projected lower PLF for FY 2009-10 for all its existing stations as against the actual PLF achieved during FY 2006-07, FY 2007-08 and FY 2008-09.

CSPGCL has submitted the following reasons for projecting lower PLF in FY 2009-10:

- For Korba East Phase II, during the last few years, the station is continuously stretched putting pressure on the planned maintenance and also lower size units faces more tripping.
- For Korba West, during the last few years, the station is continuously stretched putting pressure on the planned maintenance and the first two units of the station completed their useful life in FY 2008-09 and other two units will complete their useful life in FY 2009-10.
- For Korba East Extension, Unit II will pass through stabilization period in the FY 2009-10.
- Coal quality.

CSPGCL has further submitted that the maintenance plan during FY 2009-10 has been considered while projecting the PLF. The summary of maintenance plan of thermal units as given by CSPGCL is given in the table below:

Table 3.10
Maintenance Plan for FY 2009-10 considered in the Petition

Power Station	Capacity (MW)	Maintenance Plan during FY 2009-10 (Days)
Korba West Unit 1	210	30
Korba West Unit 2	210	30
Korba West Unit 3	210	30
Korba West Unit 4	210	30
Korba East Power House-II Unit 1	50	30
Korba East Power House-II Unit 2	50	30
Korba East Power House-II Unit 3	50	30
Korba East Power House-II Unit 4	50	30
Korba East Power House-III Unit 1	120	30
Korba East Power House-III Unit 2	120	30
Korba East Extn I	250	-
Korba East Extn II	250	-

Commission's Views

During the technical valdation sessions, the Commission has asked CSPGCL to submit the actual performance during FY 2008-09 and the same was submitted by CSPGCL. During FY 2008-09, the actual PLF of Korba West has increased from 82.50% in FY 2007-08 to 86.76% in FY 2008-09 and the PLF of Korba East III is almost comparable to the PLF achieved in FY 2007-08. Though, there is a reduction in PLF of Korba East II from 87.13% in FY 2007-08 to 82.47% in FY 2008-09, however, it is more than normative PLF of 80% as per CERC Regulations, 2004 applicable during FY 2008-09.

During the technical validation sessions, the Commission has directed the CSPGCL to submit the revised maintenance plan for its existing thermal units for FY 2009-10. The revised maintenance plan is as given in table below:

Table 3.11
Revised Maintenance Plan for FY 2009-10 submitted by CSPGCL

Power Station	Capacity (MW)	Maintenance Plan during FY 2009-10 (Days)
Korba West Unit 1	210	40 (A/H and R/H Replacement)
Korba West Unit 2	210	20
Korba West Unit 3	210	40 (A/H Replacement)
Korba West Unit 4	210	20
Korba East Power House-II Unit 1	50	15
Korba East Power House-II Unit 2	50	15
Korba East Power House-II Unit 3	50	15
Korba East Power House-II Unit 4	50	15
Korba East Power House-III Unit 1	120	20
Korba East Power House-III Unit 2	120	20
Korba East Extn I	250	20
Korba East Extn II	250	20

The Commission has assessed the impact of revised maintenance plan on PLF projected by CSPGCL in its petition. The Commission, while approving the PLF of thermal stations for FY 2009-10, has also considered the actual PLF achieved during FY 2006-07, FY 2007-08 and FY 2008-09.

For Korba East Phase II, the PLF for FY 2009-10 after taking into account the revised maintenance plan works out to 84.11% compared to 80% as projected by CSPGCL. The actual PLF achieved during FY 2006-07, FY 2007-08 and FY 2008-09 is 92.66%, 87.13% and 82.47%, respectively. Based on the performance of this generating station in the previous years and considering the coal quality and maintenance plan, the Commission is of the view that the generation from this station at PLF of 84% is achievable. The Commission has therefore approved the PLF of 84% for FY 2009-10 for this station.

The PLF for Korba East Phase III for FY 2009-10 after considering the revised maintenance plan, works out to 80.74% compared to 78% as projected by CSPGCL. The actual PLF achieved during FY 2006-07, FY 2007-08 and FY 2008-09 is 78.95%, 79.36% and 79.31% respectively. The station has been achieving PLF of around 79%

during the last three years. Based on the performance of this generating station in the previous years and considering the maintenance plan, the Commission is of the view that the generation from this station at PLF of 79% is achievable. The Commission has therefore approved the PLF of 79% for FY 2009-10 for this station.

The PLF for Korba West for FY 2009-10 after considering the revised maintenance plan works out to 80% which is same as projected by CSPGCL. The actual PLF achieved during FY 2006-07, FY 2007-08 and FY 2008-09 is 80.78%, 82.50% and 86.76% respectively. CSPGCL has submitted that first two units of the station completed their useful life in FY 2008-09 and other two units will complete their useful life in FY 2009-10. Considering the past performance of station, revised maintenance plan, coal quality and vintage of the units, the Commission has approved the PLF of 82% for FY 2009-10 for this station.

For new thermal power plant, Korba East Extension, the Commission has approved the normative PLF of 85% for FY 2009-10, considering the norms prescribed by Central Regulations.

The summary of PLF projected by CSPGCL and approved by the Commission for thermal stations of CSPGCL for FY 2009-10 is given in table below:

Table 3.12
Plant Load Factor (PLF) for CSPGCL's Generating Stations for FY 2009-10

Power Station	Petition	Approved by Commission for FY 2009-10
Korba West Power House	80.00%	82.00%
Korba East Power House-II	80.00%	84.00%
Korba East Power House-III	78.00%	79.00%
Korba East Extn	82.50%	85.00%

B) Generation from Hydel and Co-generation Plants

CSPGCL has projected generation from hydel generating stations for FY 2009-10 considering the hydrology factor achieved in the past. The projected generation from hydel and Co-generation generating stations is given in the table below:

Table 3.13
Gross Generation from Hydel and Co-generation Plants – CSPGCL

Power Station	FY 2006-07 (Actual)	Approved by the Commission for FY 2007-08	FY 2007-08 (Actual)	FY 2008-09 (Petition)	FY 2008-09 (Actual)	FY 2009-10 (Petition)
Generation (MU)						
Hydel Plants						
Hasdeo Bango (120 MW)	358.57	358.71	221.51	283.82	260.02	315.36
Mini Micro HPS Korba Hydel (1.7 MW)*	27.25	6.91	6.19	6.33	6.43	10.42*
Sikasar (7 MW)	6.91	18.00	9.52	8.58	7.05	9.20
Gangrel (10 MW)	5.97	27.25	33.84	35.04	25.33	26.28
Total Hydel (138.7 MW)*	**365.48**	**410.87**	**271.06**	**333.77**	**298.83**	**361.26**
State Co-Gen Plants						
Kawardha Cogeneration Plant (6 MW)	2.71	24.27	5.63	7.90	2.12	15.80

*Second unit of 0.85 MW is expected to be commissioned in FY 2009-10

Commission's views

The Commission has analysed the actual generation during previous years and observed that the gross generation proposed by CSPGCL for hydro stations is more than the average of past three years. Hence, the Commission has approved the gross generation as proposed by CSPGCL for all the Hydro Generating Stations of CSPGCL for FY 2009-10.

The summary of gross generation from hydel stations and co-generation stations as projected by CSPGCL in its petition and as approved by the Commission is given in the table below:

Table 3.14
Gross Generation from Hydel and Co-generation Plants for FY 2009-10 approved by the Commission

Power Station	Capacity (MW)	Petition (MU)	Approved by the Commission (MU)
Hydel Plants			
Hasdeo Bango	120.0	315.36	315.36
Mini Micro HPS Korba Hydel	1.7*	10.42	10.42
Sikasar	7.0	9.20	9.20
Gangrel	10.0	26.28	26.28
Total Hydel	138.7*	361.3	361.3
State Co-Gen Plants			
Kawardha Cogeneration Plant	6.0	15.80	15.80

*Second unit of 0.85 MW is expected to be commissioned in FY 2009-10

C) Auxiliary Consumption of Thermal Stations

CSPGCL has projected auxiliary consumption for FY 2008-09 and FY 2009-10 as given in the table below:

Table 3.15

Auxiliary Consumption of Thermal Stations

Power Station	FY 2006-07 (Actual)	Approved by the Commission for FY 2007-08	FY 2007-08 (Actual)	FY 2008-09 (Petition)	FY 2008-09 (Actual)	FY 2009-10 (Petition)
Korba West Power House	9.37%	9.45%	9.17%	8.96%	8.70%	9.00%
Korba East Power House-II	10.16%	10.00%	10.80%	11.80%	11.40%	11.50%
Korba East Power House-III	8.48%	8.98%	8.47%	8.90%	8.79%	9.00%
Korba East Extn	-	9.00%	7.53%	8.27%	7.47%	9.25%

CSPGCL has submitted that the units of Korba East Phase II are of smaller size i.e., 50 MW size and are of Russian design. Further, higher safety margins and robustness results in auxiliaries equipped with heavy rated motors. Due to these reasons the auxiliary consumption of these units is on a higher side. CSPGCL has further submitted that even for guaranteed performance period after refurbishment, when the PLF on annual basis was more than 90%, auxiliary energy consumption remained higher than 10% and the quality of coal was also poor.

For Korba East Phase III, CSPGCL has projected an increase of 0.53% in auxiliary consumption for FY 2009-10 as compared to the actual auxiliary consumption for FY 2007-08, considering the practical conditions of the units and poor quality of coal. For Korba West, CSPGCL has envisaged a reduction of 0.08% in auxiliary consumption for FY 2009-10 as compared to the actual auxiliary consumption for FY 2007-08. For Korba East Extension, CSPGCL has submitted that auxiliary consumption for one unit will be at normative level of 9% and for Unit II, it will be 9.5% and thus average of 9.25% auxiliary energy consumption has been considered for these two units.

Commission's Views

The normative auxiliary consumption proposed for two stations, Korba West and Korba East III by CSPGCL for FY 2009-10 is approved by the Commission. For Korba East II, considering the small size of Units, vintage, coal quality and past performance, the Commission has approved the auxiliary energy consumption for Korba East II by increasing the approved auxiliary energy consumption for FY 2007-08 by 1%. Thus, the Commission approves the auxiliary energy consumption of 11% for Korba East II.

For Korba East Extension, CSPGCL has submitted that 9% and 9.5% auxiliary consumption should be allowed for Unit I and II respectively, resulting in average 9.25% auxiliary consumption for Korba East Extension. However, the Commission does not agree with CSPGCL's views and approves the normative auxiliary consumption of 9% for Korba East Extension, considering the norms prescribed by Central Regulations and although the actual auxiliary consumption from these units is lesser than normative auxiliary consumption, however the Commission has approved normative auxiliary consumption as per Tariff Policy. **The summary of station-wise auxiliary consumption as projected by CSPGCL in its petition and as approved by the Commission is given in the following table:**

Table 3.16

Auxiliary Consumption of Thermal Stations for FY 2009-10

Power Station	CSPGCL (Petition)	Approved by Commission
Korba West Power House	9.00%	9.00%
Korba East Power House-II	11.50%	11.00%
Korba East Power House-III	9.00%	9.00%
Korba East Extn Unit-1	9.00%	9.00%
Korba East Extn Unit-2	9.50%	

D) Auxiliary Consumption of Hydel and Co-generation Plants

CSPGCL has projected the auxiliary consumption of Hydel and Co-generation Plants for FY 2008-09 and FY 2009-10 as given in the table below:

Table 3.17

Auxiliary Consumption of Hydel and Co-generation Plants submitted by CSPGCL

Power Station	FY 2006-07 (Actual)	Approved by the Commission for FY 2007-08	FY 2007-08 (Actual)	FY 2008-09 (Petition)	FY 2008-09 (Actual)	FY 2009-10 (Petition)
Hydel Plants						
Hasdeo Bango	0.38%	0.38%	0.56%	0.56%	0.43%	0.50%
Mini Micro HPS Korba Hydel	0.50%	0.50%	1.00%	1.00%	0.99%	1.00%
Sikasar	0.50%	0.50%	5.11%	3.00%	2.27%	3.00%
Gangrel	4.55%	4.55%	1.31%	1.40%	1.70%	2.00%
State Co-Gen Plants						
Kawardha Cogeneration Plant	9.00%	8.90%	31.88%	30.00%	33.03%	25.00%

Commission's Views

The Commission has observed that the actual auxiliary consumption of Gangrel station for FY 2007-08 was 1.33% which was less than the approved for FY 2007-08. Considering the prevailing conditions, the Commission has allowed the auxiliary consumption of 1.40% for FY 2009-10. The Commission has approved the same auxiliary consumption of 1.40% for Sikasar station, since these are small hydel plants, the auxiliary consumption higher than normative has been considered by the Commission. Regarding Hasdeo Bango, the Commission has approved normative auxiliary consumption 0.5% for FY 2009-10 as per CERC Regulations, 2009.

For Kawardha Co-generation plant CSPGCL has projected 25% auxiliary consumption for FY 2009-10. However, CSPGCL has not considered the sale of steam for FY 2009-10 and CSPGCL was not able to submit the auxiliary consumption required excluding the consumption required for sale of steam. As elaborated in section 3.2.4, the auxiliary consumption is not computed properly by CSPGCL as the energy required to produce steam is also accounted in auxiliary consumption. Therefore the Commission approves 10% auxiliary consumption for FY 2009-10 based on Commission's order on Tariff for Biomass Plants.

The auxiliary consumption for hydel and cogeneration plant as projected by CSPGCL and as approved by the Commission for FY 2009-10 is given in the following table:

Table 3.18

Auxiliary Consumption of Hydel and Co-generation Plants for FY 2009-10

Power Station	CSPGCL (Petition)	Approved by Commission
Hydel Plants		
Hasdeo Bango	0.50%	0.50%
Mini Micro HPS Korba Hydel	1.00%	1.00%
Sikasar	3.00%	1.40%
Gangrel	2.00%	1.40%
State Co-Gen Plants		
Kawardha Cogeneration Plant	25.00%	10%

E) Station Heat Rate

CSPGCL has projected the station heat rate for FY 2009-10 as shown in the table below:

Table 3.19

Station Heat Rate submitted by CSPGCL (kcal /kWh)

Power Station	FY 2006-07 (Actual)	FY 2007-08 (Approved)	FY 2007-08 (Actual)	FY 2008-09 (Petition)	FY 2008-09 (Actual)	FY 2009-10 (Petition)
Korba West Power House	2783	2575	2802	2625	2592	2650
Korba East Power House-II	2942	2780	2976	3196	3200	3020
Korba East Power House-III	2639	2600	2701	2800	2800	2700
Korba East Extn	-	2500	2816	2750	2577	2625

CSPGCL has projected the SHR for FY 2009-10 at higher level than the approved SHR for FY 2007-08 for all the Stations. The reasons submitted by CSPGCL for projecting higher SHR are as follows:

- For Korba East -II Design Heat Rate for 50 MW Unit is 2650 kcal/kwh and considering the margin due to vintage and low calorific value of coal the heat rate is projected at 3020 kcal/kWh
- For Korba East III Design Heat Rate for 120 MW Unit is 2434 kcal/kwh and considering the margin due to vintage and low calorific value of coal the heat rate is projected 2700 kcal/kWh.
- For Korba West, SHR of 2650 kcal/kWh as per tariff policy may be allowed.
- For Korba East Extension, SHR of 2625 kcal/kWh for FY 2009-10 is projected due to the stabilization period of Unit I.

Commission's Views

The Commission has observed that SHR of all the Korba Thermal Stations for FY 2009-10 is on the higher side than the approved SHR for FY 2007-08. The Commission, during the technical validation session, asked CSPGCL to submit the Design Parameters as Guaranteed by Manufacturers and as per PG Test report for Korba East after Renovation and Modernization and Korba East Extension. CSPGCL in its reply has made the following submissions:

- For Korba East Phase II and III, the Guaranteed Station Heat Rate of 2650 kcal/kWh and 2434 kcal/kWh respectively.

For Korba West, the Commission has observed that the actual heat rate achieved during FY 2004-05 and FY 2005-06 as 2536 kcal/kWh, 2642 kcal/kWh respectively. The actual heat rate in FY 2006-07 and FY 2007-08 has increased substantially, however, the actual heat rate achieved in FY 2008-09 has improved as compared to heat rate achieved in FY 2006-07 and FY 2007-08. Considering the vintage of the station (not yet refurbished), actual heat rate achieved in previous years, the Commission has approved the SHR of 2650 kcal/kWh as proposed by CSPGCL for FY 2009-10.

For Korba East II, the actual station heat rate during all the years from FY 2004-05 to FY 2008-09 has been higher than the heat rate approved by the Commission in its previous tariff orders. Considering the actual performance of the station and coal quality, the Commission has revised the heat rate norm for Korba East II to 2915 kcal/kWh after considering 10% margin on guaranteed design heat rate of 2650 kcal/kWh.

For Korba East III, the actual station heat rate achieved during FY 2006-07 was 2639 kcal/kWh as against approved heat rate of 2600 kcal/kWh. Considering the actual performance of the station and coal quality, the Commission has revised the heat rate norm for Korba East III to 2677 kcal/kWh after considering 10% margin on guaranteed design heat rate of 2434 kcal/kWh.

For Korba East Extension, the Commission has approved the normative SHR of 2500 kcal/kWh for FY 2009-10.

The approved SHR of CSPGCL's thermal generating stations for FY 2009-10 are shown in the table below.

Table 3.20

Station Heat Rate for FY 2009-10 (kcal /kWh)

Power Station	CSPGCL (Petition)	Approved by Commission
Korba West Power House	2650	2650
Korba East Power House-II	3020	2915
Korba East Power House-III	2700	2677
Korba East Extn	2625	2500

F) Specific Oil Consumption

CSPGCL has projected the station-wise specific oil consumption for thermal generation stations for FY 2009-10, as shown in the table below:

Table 3.21

Specific Oil Consumption Projected by CSPGCL (ml/kWh)

Power Station	FY 2006-07 (Actual)	Approved by the Commission for FY 2007-08	FY 2007-08 (Actual)	FY 2008-09 (Petition)	FY 2008-09 (Actual)	FY 2009-10 (Petition)
Korba West Power House	1.27	1.50	1.14	1.00	1.13	1.00
Korba East Power House-II	1.20	1.50	1.29	3.00	2.8	3.00
Korba East Power House-III	1.48	1.50	1.52	4.00	3.40	3.00
Korba East Extn	-	2.00	16.58	2.00	1.36	1.50

CSPGCL has submitted that during FY 2008-09, in the monsoon periods to attain flame stability oil support was utilized and hence the specific oil consumption is more than 2% for Korba East II and III. For Korba West and Korba East Extension, CSPGCL has proposed specific oil consumption less than 2 ml/unit for FY 2009-10.

Commission's Views

The Commission has observed that Specific oil consumption of Korba East II and III is on higher side than the approved Specific oil consumption for FY 2007-08. The Commission, during the technical validation session, directed CSPGCL to submit the reason for higher Specific oil consumption of Korba East II and III. CSPGCL has submitted that poor quality of coal, wet coal, coal feeding problem and poor bunkering etc. are some reasons for higher oil consumption.

The CERC norm for secondary fuel oil consumption is 1 ml/kWh. The Commission has observed that the actual secondary fuel oil consumption for Korba West and Korba East II stations achieved during FY 2007-08 is lower than the secondary fuel oil consumption approved by the Commission for FY 2007-08. The Commission after considering the actual secondary fuel oil consumption achieved during FY 2007-08 has approved the secondary fuel oil consumption of 1.5 ml/kWh for Korba East II and III stations for FY 2009-10.

For Korba West, the Commission has approved the secondary fuel oil consumption of 1 ml/kWh as proposed by the CSPGCL for FY 2009-10 For Korba East Extension, normative secondary fuel oil consumption of 1 ml/kWh is approved by the Commission for FY 2009-10. **The station-wise secondary fuel oil consumption as approved by the Commission for FY 2009-10 is given in the table below:**

Table 3.22

Specific Oil Consumption for FY 2009-10 (ml/kWh)

Power Station	CSPGCL (Petition)	Approved by Commission
Korba West Power House	1.00	1.00
Korba East Power House-II	3.00	1.50
Korba East Power House-III	3.00	1.50
Korba East Extn	1.50	1.00

Based on approved parameters as discussed above for plant load factor, auxiliary consumption, station heat rate and secondary fuel oil consumption, the Commission has determined the gross generation, net generation, coal and oil consumption and total fuel (variable) costs as discussed in next sections.

3.4.2 Gross Generation and Net Generation

The gross generation as projected by CSPGCL and as approved by the Commission (based on approved PLF) for FY 2009-10 is given in the table below:

Table 3.23

Gross Generation Approved by Commission for FY 2009-10 (MU)

Power Station	Capacity (MW)	CSPGCL Petition (MU)	Approved PLF (%)	Approved by the Commission (MU)
Korba West Power House	840.0	5,886.72	82.0%	6,033.89
Korba East Power House-II	200.0	1,401.60	84.0%	1,471.68
Korba East Power House-III	240.0	1,639.87	79.0%	1,660.90
Korba East Extn	500.0	3,613.50	85.0%	3,723.00
Total Thermal	**1780.0**	**12,541.69**		**12,889.46**
Hasdeo Bango	120.0	315.36	-	315.36
Mini Micro HPS Korba Hydel	1.7*	10.42	-	10.42
Sikasar	7.0	9.20	-	9.20
Gangrel	10.0	26.28	-	26.28
Total Hydro	**138.7***	**361.26**	**-**	**361.26**
Kawardha Cogeneration Plant	6.0	15.80	-	15.80
Total Cogen	**6.0**	**15.80**	**-**	**15.80**
Total Gross Generation	**1924.7***	**12,918.75**	**-**	**13,266.52**

*One unit of 0.85 MW is considered to be commissioned in FY 2009-10

Considering the approved auxiliary consumption for each generating station, the net generation approved by the Commission from each station of CSPGCL for FY 2009-10 is given in the table below:

Table 3.24

Net Generation Approved by the Commission for FY 2009-10 (MU)

Stations	Projected Net Generation (CSPGCL)	Approved Gross Generation (MU)	Approved Auxiliary Consumption (%)	Approved Auxiliary Consumption (MU)	Approved Net Generation (MU)
Korba West Power House	5356.92	6033.89	9.00%	543.05	5490.84
Korba East Power House-II	1240.42	1471.68	11.00%	161.88	1309.80
Korba East Power House-III	1492.28	1660.90	9.00%	149.48	1511.42
Korba East Extn	3279.25	3723.00	9.00%	335.07	3387.93
Total Thermal	**11368.87**	**12889.46**		**1189.49**	**11699.98**
Hasdeo Bango	313.78	315.36	0.50%	1.58	313.78
Mini Micro HPS Korba Hydel	10.32	10.42	1.00%	0.10	10.32
Sikasar	9.07	9.20	1.40%	0.13	9.07
Gangrel	25.75	26.28	1.40%	0.37	25.91
Total Hydro	**358.92**	**361.26**		**2.18**	**359.08**
Kawardha Cogeneration Plant	11.85	15.80	10.00%	1.58	14.22
Total Cogen	**11.85**	**15.80**		**1.58**	**14.22**
Total Net Generation	**11739.64**	**13266.52**		**1193.24**	**12073.28**

3.4.3 Fuel Costs

(A) Fuel Supply

CSPGCL gets its coal supply from South Eastern Coal Ltd. (SECL) from its coalfields near Korba. Coal is transported by rail, ropeway and conveyor belt over a distance of about 10-15 km. The secondary fuel (oil) is supplied by the oil companies.

(B) Transit & Stacking Loss of Coal

All the thermal power stations of CSPGCL except Kawardha Cogeneration are pithead stations. For FY 2009-10, CSPGCL has projected transit and stacking loss of 1.50% for Korba East phase II, III and Korba East Extension and for Korba West, it has proposed transit and stacking losses of 0.25%.

The Commission has approved transit and stacking loss of 0.20% for Korba West taking into account the actual transit and stacking loss in FY 2007-08 as 0.20%. The Commission in its order for FY 2007-08 approved the transit and stacking loss of 1.26% for Korba East Stations including extension units, considering reduction of 0.2% in transit and stacking loss from actual transit loss of FY 2006-07. However CSPGCL has submitted that the actual transit and stacking loss for Korba East Stations for FY 2007-08 was 1.57%. Considering the transit and stacking losses reported for FY 2007-08, the Commission is of the view it may not be possible for CSPGCL to achieve normative transit loss of 0.3% for Korba East Stations. The Commission has accepted the opening levels of transit & stacking losses projected by the CSPGCL, however these may not be accurate as the weightometers have been installed recently at these thermal generating stations. The Commission has considered the reduction of 0.1% per year in transit & stacking losses for Korba East station over the approved transit & stacking loss of FY 2007-08. Therefore, the Commission has approved transit and stacking losses of 1.06% for Korba East stations and Extension units.

Table 3.25

Transit & Stacking Loss Approved by the Commission for FY 2009-10 (%)

Stations	Approved by the Commission for FY 2007-08	FY 2007-08 (Actual)	FY 2008-09 (Petition)	FY 2009-10 (Petition)	FY 2009-10 (Approved)
Korba West Power House	0.48%	0.20%	0.25%	0.25%	0.20%
Korba East Power House-II	1.26%	1.57%	1.57%	1.50%	1.06%
Korba East Power House-III	1.26%	1.57%	1.57%	1.50%	1.06%
Korba East Extn	1.26%	1.57%	1.57%	1.50%	1.06%

3.4.3.1 Assessment of fuel requirement and cost

A) Coal

The consumption of coal, oil and the related costs are derived from the following parameters:

- Station heat rate (Kcal/kWh)
- Calorific value of coal (kcal/kg)
- Calorific value of secondary fuel (kcal/Litre)
- Gross generation (MU)
- Specific oil consumption (ml/kWh)
- Price of coal and oil

CSPGCL has projected the fuel costs for FY 2009-10 based on actual cost attained in FY 2008-09. The coal and oil prices and calorific value of coal and oil as considered by CSPGCL for FY 2009-10 are given in the following Table:

Table 3.26

Coal, Oil Prices and Calorific Value as proposed by CSPGCL

Stations	Wt. Avg. Cost of Coal	Wt. Avg. CV of Coal	Cost of sec. oil	CV of oil
	Rs./MT	kcal/kg	Rs./ kl	kcal/l
Korba West Power House	819.20	3600	40135.80	10000
Korba East Power House-II	753.50	2982	40135.80	10000
Korba East Power House-III	753.50	2982	40135.80	10000
Korba East Extn	823.70	3800	40135.80	10000

Commission's Views

The Commission has obtained the details of actual weighted average coal prices and corresponding calorific value for the coal purchased during the months from April 2008 to February 2009. The Commission has computed average of actual coal price and calorific value for April 2008 to Feb 2009 for FY 2008-09 (11 months average) as shown in the table below.

Table 3.27

Coal Consumption and Cost for FY 2008-09

Month	Korba East Ext			Korba West			Korba East		
	Consumption (MT)	Cost (Rs. Crore)	Price (Rs./MT)	Consumption (MT)	Cost (Rs. Crore)	Price (Rs./MT)	Consumption (MT)	Cost (Rs. Crore)	Price (Rs./ MT)
Apr-08	165889.12	13.85	-	422347	34.08	-	268430	18.60	-
May-08	188565.96	15.14		444455	34.70		258990	17.77	
Jun-08	155900.12	12.67		411014	32.12		184394	12.56	
Jul-08	228598.5	18.40		387390	30.32		217962	14.87	
Aug-08	246322.8	20.05		315328	24.89		228178	15.19	
Sep-08	226236.68	18.52		300643	25.97		251693	17.11	
Oct-08	254195.94	20.81		386888	32.96		278607	19.21	
Nov-08	255492.16	21.60		360642	31.15		284462	19.34	
Dec-08	243422.06	19.95		345306	29.13		284965	19.62	
Jan-09	209583.16	17.12		430190	36.52		270764	29.42	
Feb-09	230817.58	18.97		383869	32.59		-	-	
Total	**2405024.08**	**197.09**	**819.49**	**4188072**	**344.43**	**822.40**	**2528445**	**183.69**	**726.51**
Last 3 Months Average	**683822**	**56.04**	**819.49**	**1159365**	**98.23**	**847.29**	**840191**	**68.38**	**813.91**

The Commission in accordance with the methodology adopated in previous tariff orders for projecting the fuel prices has considered the actual weighted average cost of coal and gross calorific value for latest three months (Dec, 08 to Feb, 09) of FY 2008-09.

The coal price and calorific value as considered by the Commission for FY 2009-10 is summarised in the following table:

Table 3.28
Coal Price and Calorific Value as considered by the Commission

Stations	GCV of Coal (kcal/kg)	Cost of Coal (Rs./MT)
	FY 2009-10	
Korba West Power House	3744.48	847.29
Korba East Power House-II	3022.11	813.91
Korba East Power House-III	3022.11	813.91
Korba East Extn	3571.54	819.49

B) Secondary Fuel (Oil)

CSPGCL generaly uses 90% to 96% furnace oil and 4% to 10%HSD/LDO for Korba East and a mix of furnace oil and HSD/LDO for Korba East Extension and Korba West stations. As regards price of secondary fuel, the CSPGCL in its petition has submitted the details of actual prices for FY 2007-08 and price projected for estimating the fuel costs for FY 2009-10.

Commission's Views

The Commission has obtained the details of actual secondary fuel oil prices for the period from April 2008 to February 2009. The Commission has considered the calorific value of oil as 10000 kcal/kg as projected by CSPGCL in its petition. The oil prices in the second half of FY 2008-09 have reduced substantially due to reduction in oil prices globally. The Commission has considered the price of Furnace Oil (FO) and High Speed Diesel (HSD) based on latest bills submitted by CSPGCL. Considering the actual secondary fuel oil prices and proportion of 90% furnace oil and 10% HSD for thermal generating stations of CSPGCL except for Korba East II, considered 100% furnace oil, **the weighted average price of secondary fuel and calorific value considered by the Commission is given in the following tables:**

Table 3.29
Secondary Fuel Price and Calorific Value as considered by the Commission

Stations	CV of Secondary Fuel (kcal/Lt.)	Cost of Oil (Rs./kL)
	FY 2009-10	
Korba West Power House	10000	20009
Korba East Power House-II	10000	18521
Korba East Power House-III	10000	20009
Korba East Extn	10000	20009

For Kawardha co-generation plant, the Commission has considered variable cost of Rs. 1.46/kWh for FY 2009-10 as applicable for biomass plants in accordance with the Commission's order on tariff for Biomass Plants.

3.4.3.2 Other Fuel Related Variable Cost

CSPGCL has considered other fuel related costs, cost of lubricants and consumables and station supplies for calculating the variable charges. It has not provided any justification pertaining to other fuel related costs and station supplies.

As these costs are included in R&M expenses, the Commission has not included these costs in the computation of fuel related variable costs. In addition to these costs, the other fuel related costs include cess on water supplied, Electricity Duty, and cess on auxiliary consumption. CSPGCL has estimated the total financial implications on account of ED and cess on auxiliary consumption and water charges for FY 2009-10 as Rs. 15.27 Crore for Hydro Generating Stations. As these charges (ED and cess on auxiliary consumption) and water charges are Government levies, **the Commission approves these charges of Rs 15.27 Crore as proposed by CSPGCL for FY 2009-10.**

3.4.3.3 Total Fuel Cost

Based on the target and rates approved by the Commission for FY 2009-10, the summary of total fuel costs as estimated by CSPGCL in its petition and as approved by the Commission for FY 2009-10 is given in following table:

Table 3.30

Total Fuel Costs approved by Commission for FY 2009-10 (Rs. Crore)

Stations	CSPGCL Petition	Approved by the Commission
	FY 2009-10	
Korba West Power House	401.84	371.61
Korba East Power House-II	136.36	115.53
Korba East Power House-III	142.60	120.45
Korba East Extn	259.85	230.20
Kawardha Co-Generation	3.85	2.08
Hydro Generating Station (Water Charges)	15.27	15.27
Total	**959.77**	**855.46**

The total fuel cost approved by the Commission for FY 2009-10 is Rs. 855.46 Crore as against Rs. 959.77 Crore estimated by CSPGCL.

Table 3.31

Summary of Approved Station-wise Operational Parameters and Fuel Cost of Thermal Generation Stations for FY 2009-10

Sl. No.	Particulars	Unit	Korba West	Korba East Phase-II	Korba East Phase-III	Korba East Extension
1	Capacity	MW	840	200	240	500
2	P.L.F	%	82.00%	84.00%	79.00%	85.00%
3	Generation (Gross)	MU	6,033.89	1,471.68	1,660.90	3,723.00
4	Auxiliary consumption	%	9.00%	11.00%	9.00%	9.00%
5	Auxiliary consumption	MU	543.05	161.88	149.48	335.07
6	Net Generation	MU	5490.84	1309.80	1511.42	3387.93
7	Heat Rate	KCal/KWh	2,650	2,915	2,677	2500
8	Specific Oil Consumption	Ml/KWh	1.00	1.50	1.50	1.00
9	Calorific Value of Oil	KCal/litre	10,000	10,000	10,000	10000
10	Calorific Value of Coal (GCV)	KCal/Kg.	3,761	3,150	3,150	3440
11	Overall Heat	G. Cal.	15989803	4289947	4446883	9307500
12	Heat from Oil	G.Cal	60339	22075	24913	37230
13	Heat from Coal	G.Cal	15929464	4267872	4421970	9270270
14	Actual Oil Consumption	KL	6,034	2,208	2,491	3,723
15	Actual Coal Consumption	Lakh Tonnes	42.35	13.55	14.04	26.95
16	Transit & Stacking Loss	%	0.20%	1.06%	1.06%	1.06%
17	Coal Consumption including stacking & handling loss	Lakh Tonnes	42.43	13.69	14.19	27.18
18	Cost of Oil per KL	Rs./KL	20,009	18,521	20,009	20009
19	Cost of Coal per MT	Rs./MT	847.29	813.91	813.91	819.49
20	Total Cost of Oil	Rs. Crore	12.07	4.09	4.98	7.45
21	Cost of Coal	Rs. Crore	359.54	111.44	115.46	222.75
22	Total Fuel Cost	Rs. Crore	371.61	115.53	120.45	230.20
23	Fuel cost / Unit Gross	Rs./KWh	0.62	0.78	0.73	0.62
24	Fuel cost / Unit Net	Rs./KWh	0.68	0.88	0.80	0.68
25	Specific Coal Consumption	Kg/KWh	0.70	0.93	0.85	0.73

Table 3.32

Summary of Approved Station-wise Fuel and other variable Cost of CSPGCL's Generation Stations for FY 2009-10

Station	Gross Generation (MU)		Net Generation (MU)		Fuel Cost (Rs Crore)		Other Variable Costs (Rs Crore)		Total Variable Cost (RsCrore)		Variable Charges (Rs/kWh)	
	Petition	Approved	Petition	Approved	Petition	Approved	Petition	Approved	Petition	Approved	Petition	Approved
	MU	MU	MU	MU	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs./ kWh	Rs./ kWh
Korba West Power House	5,886.72	6,033.89	5356.92	5490.84	379.49	371.61	22.35	0	401.84	371.61	0.75	0.68
Korba East Power House-II	1,401.60	1,471.68	1240.42	1309.80	125.46	115.53	10.9	0	136.36	115.53	1.10	0.88
Korba East Power House-III	1,639.87	1,660.90	1492.28	1511.42	133.32	120.45	9.28	0	142.6	120.45	0.96	0.80
Korba East Extn	3,613.50	3,723.00	3279.25	3387.93	230.5	230.20	29.35	0	259.85	230.20	0.79	0.68
Kawardha Co-generation Plant	15.80	15.80	11.85	14.22	3.49	-	0.37	-	3.85	2.08	3.25	1.46
Total	12557.49	12905.26	11380.72	11714.20	872.26	837.78	72.25	0	944.50	839.86	0.83	0.72

3.4.4 Operation and Maintenance (O&M) Expenses

The operation and maintenance (O&M) expenses are generally considered under the following heads:

- Employee expenses
- Repairs & Maintenance Expenses
- Administration & General Expenses

3.4.4.1 Employee Expenses

CSPGCL has submitted actual employee expenses for CSEB as a whole for FY 2007-08 and apportioned among the three functions, based on the number of employees in each of them.

Table 3.33

Employee Expenses of erstwhile CSEB for FY 2007-08 (Rs. Crore)

S. No	Particulars	FY 2007-08	
		Approved	Actual
1	Salaries	170.08	169.63
2	Overtime	-	13.66
3	Dearness Allowance (DA)	99.90	93.97
4	Other Allowances	24.07	30.90
5	Bonus/ Exgratia	-	8.48
6	Productive incentive	-	2.29
7	Additional Pay	86.07	82.92
8	Interim Relief/wage revision	27.08	93.83
9	Medical Expenses Reimbursement	45.91	2.17
10	Leave Travel Assistance		1.83

S. No	Particulars	FY 2007-08	
		Approved	Actual
12	Earned Leave Encashment		5.97
14	Payment under Workmen's Compensation Act		0.42
17	Supply of Free Electricity to Employees		0.93
18	Other Allowances and benefits		-
19	Staff Welfare Expenses	-	6.82
20	Terminal benefits	172.14	190.69
	TOTAL	**625.25**	**704.51**

Table 3.34

Allocation of Employee Expenses (Rs. Crore)

Function			Proportion of Employees	
	FY 2007-08		FY 2007-08	
	Approved	Actual	Approved	Provisional
Generation	166.07	217.39	26.56%	27.47%
Transmission	51.15	54.79	8.18%	10.58%
Distribution	408.04	432.33	65.26%	61.95%
Total	**625.26**	**704.51**	**100.00%**	**100.00%**

CSPGCL has projected employee expenses for the FY 2008-09 and FY 2009-10 based on the following assumptions.

- Increase in salary for FY 2008-09 considered as 18% (on account of VI pay revision) plus 6% normal increase and for FY 2009-10 as 6% (nominal percentage increase).
- Escalation of 8% in overtime allowance.
- Dearness Allowance (DA) rate considered as 54% & 66% for the FY 2008-09 & FY 2009-10 respectively as per Government orders.
- Increase of 23% & 6% considered in other cost for FY 2008-09 & FY 2009-10 respectively on account of 6^{th} Pay Commission.
- Additional pay @ 50%of basic salary.
- Escalation of 6% and 8% on other employee expenses.
- Escalation of 6% on Employer's contribution towards leave encashment.
- Contribution of Rs 394 Crore in FY 2008-09 and Rs 300 Crore in FY 2009-10 towards terminal benefit fund for all three companies. The amount considered in the petition, however is Rs 394 Crore)

The total employee expenses projected for FY 2009-10 is Rs. 277.16 Crore and Rs. 300.56 Crore, respectively as shown in the table below:

Table 3.35

Employee Expenses projected by CSPGCL (Rs. Crore)

Sl No.	Particulars	FY 2008-09	FY 2009-10
		Petition	Petition
1	Basic Pay	65.28	69.20
2	Additional Pay	32.64	34.60
3	Dearness Allowances	52.63	68.51
4	Interim Relief	0.00	0.00
5	Other Allowances	19.57	20.82
6	Other Allowances and Benefits	15.71	16.93
7	Contribution to Gratuity and Pension Fund	100.99	100.99
	Total	**286.83**	**311.05**
	Less: Capitalization	-9.67	-10.48
	Total	**277.16**	**300.56**

The major reasons for increase in the employee expenditure are due to wage revision, increase in DA rates and increase in contribution to the Pension funds. CSPGCL has submitted that the wage revision is necessary to keep the employees motivated and pay them at par with the industry.

Commission's views

The major reasons for increase in employee expenses for FY 2007-08 is due to wage revision. In the absence of division of employees in the transfer scheme, the Commission has considered the allocation of employee expenses as submitted in the petitions. The Commission has projected the employee expenses for FY 2009-10 on the basis of FY 2007-08 expenses with the following assumptions.

- Basic Pay : CSPGCL has not submitted any basis for 18% increase in basic pay towards pay revision. The pay revision was made effective from October 2007 and hence the actual employee expenses for FY 2007-08 factors in the pay revision for half of the year. Accordingly, the Commission has estimated the impact of pay revision by considering 9% increase on actual basic salary for FY 2007-08. Further, the Commission has considered the normal increase of 4% based on past trends, thus the total increase in basic pay for FY 2008-09 considered by the Commission is 13% provisional basis subject to truing up. For FY 2009-10, the Commission has considered a normal increase of 4%.
- Overtime increase is limited to 4%, i.e. increase approved for basic salaries.
- Average DA rate of 68% considered by the Commission for FY 2009-10 considering the prevalent DA rate.
- Increase in other costs at 13% for FY 2008-09 and 4% for FY 2009-10 i.e. increase approved for basic salaries.
- Additional pay @ 50%of basic salary.

- Increase in other employee expenses at 4%.
- For Pension Fund, CSPGCL has submitted that if the contribution made in an accounting period is less than that determined as per actuarial valuation, it is necessary to provide for the shortfall. The liability towards pension and gratuity fund increases from year to year due to increase in salary structure, increase in length of service of the employees, increase in number of employees and increase in the age of retirement. Maximum ceiling of the gratuity amount has been revised upward from Rs. 3.5 lakh to Rs. 10 lakh by the Chhattisgarh State Power Holding Company Limited (CSPHCL). Further, the retirement age has also been increased from 58 years to 60 years which is likely to increase the liability towards pension and graduity.

The Commission had directed the Board in the tariff order for FY 2007-08 to ensure that the amounts are contributed to the fund as booked in the accounts during the year, and invested appropriately, so that the funds can be self-generating and no provisioning is required after sometime. The Commission has directed CSEB in the tariff order for the FY 2007-08 to provide the details to the Commission regarding the size of the fund and the investment made out of the fund. All the details regarding the size of the fund and investments made have not been submitted by the Companies. The Commission has obtained a copy of Actuarial Valuation Report and the total fund requirement towards terminal benefits as on March 2008 is Rs 2735 crore for all three functions of generation, transmission and distribution. The total contribution made to fund till FY 2007-08 is Rs 1640 Crore. The three (CSPGCL, CSPTCL and CSPDCL(projected the total pension and gratuity expenses of Rs. 390.69 crore for FY 2009-10 which includes Rs. 300 crore towards lump-sum contribution to the fund and balance Rs. 90.69 crore towards payment of annual outgo during FY 2009-10. The Commission has considered the lump-sum contribution to the fund of Rs. 300 crore as proposed by the three companies. In accordance with the principles adopted by the Commission in the tariff order for FY 2007-08, the Commission has not separatley considered the annual outgo during FY 2009-10. The Commission would like to clarify that as the contribution towards pension fund is allowed in ARR, the companies should meet the annual outgo of terminal benefits out of contribution made to the fund and interest earned from the deposits made in the fund. There is thus no need to separately allow any annual outgo towards terminal benefits. While the Commission has agreed to contribution to the fund to the extent of Rs 300 Crore, during FY 2009-10, it has noted that serious issues have been raised about both the size of the fund as well as its management in the public hearings. The Commisison is issuing directive on this matter separately in this order.

The Commission has approved gross employee expenditure Rs. 267.10 Crore for FY 2009-10 as against Rs. 311.05 Crore projected by CSPGCL, as given in the table below.

Table 3.36

Employee Expenses for CSPGCL (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Basic Pay	69.20	61.34
Additional Pay	34.60	30.67
Dearness Allowances	68.51	62.56
Interim Relief	0.00	0.00
Other Allowances	20.82	19.22
Other Allowances and Benefits	16.93	15.77
Contribution to Gratuity and Pension Fund	100.99	77.55
Total	**311.05**	**267.10**

3.4.4.2 Administration & General (A&G) Expenses

The A&G expenses comprise rent, rates and taxes, travel and conveyance expenses, consultancy and legal fees, insurance and other administration expenses. CSPGCL has submitted actual A&G expenses for CSEB as a whole for FY 2007-08 and apportioned among the three functions based on the function for which these have been incurred. The common expenses have been allocated amongst the three functions based on their net fixed assets. The ratio for this division is 66.23%, 14.18% and 19.59% for Generation, Transmission and Distribution respectively.

Table 3.37

A&G Expenses of erstwhile CSEB for FY 2007-08 (Rs. Crore)

S. No	Particulars	FY 2007-08	
		Approved	Actual
1	Rent, Rates & Taxes	10.34	11.93
2	Insurance	0.00	14.37
3	Revenue Stamp Expenses Account	0.02	0.01
4	Telephone Charges, Postage, Telegram and Telex charges	2.61	2.62
5	Professional Charges		
	(i) Legal Charges	2.08	1.64
	(ii) Audit Fees	0.94	0.22
	(iii) Consultancy Charges	6.96	3.18
	(iv) Technical Fees	1.72	0.98
	(v) Other Professional Charges	0.55	0.99
6	Conveyance & Travel Expenses	12.23	11.83
7	Other Expenses		
	(A) Fees & Subscription	14.45	1.02
	(B) Books & Periodicals		0.20
	© Printing & Stationary		2.87
	(D) Advertisement		4.92
	(E) Contribution		5.41
	(F) Electricity Charges (Offices)		0.99
	(G) Water Charges		0.30
	(I) Entertainment		0.30
	(J) Miscellaneous Expenses		8.57
8	Freight	0	0.01
9	Other Purchase related expenses	8.82	-6.17
	TOTAL	**60.72**	**66.06**

Table 3.38

Allocation of A&G Expenses (Rs. Crore)

Function	FY 2007-08	
	Approved	Actual
Generation	26.35	20.40
Transmission	13.58	19.18
Distribution	20.80	26.48
Total	**60.73**	**66.06**

CSPGCL has projected gross A&G expenses of Rs. 26.45 Crore and Rs. 28.30 Crore for FY 2008-09 and FY 2009-10 respectively, by adopting methodology as given in Central Electricity Regulatory Commission (CERC) Discussion Paper on CERC Terms and Conditions of Tariff Regulations, dated June 2003. The average A&G expenses for FY 2006-07 have been computed by taking the average of three years actual A&G expenses viz., FY 2005-06, FY 2006-07 and FY 2007-08 of erstwhile CSEB. This average

A&G expense of FY 2006-07 is then increased by the inflation factor @ 9% over a two year period to arrive at the projected expenses for FY 2008-09. The expenses for FY 2008-09 have been trifurcated into three functions of erstwhile CSEB as per the percentages approved by the Commission in its tariff order for FY 2007-08. Norms arrived from base year figures for A&G expenses is Rs. 0.14 Million/ MW. On the basis of norms and considering the previous 18 months WPI & CPI normal inflation rates CSPGCL has projected the A&G expenses for FY 2009-10. Percentage of inflation considered over and above the norms for projecting A&G expenses for FY 2009-10 by CSPGCL is 7%. The head-wise A&G expenditure projected by CSPGCL for FY 2008-09 and FY 2009-10 is given in the table below:

Table 3.39

A&G Expenses for FY 2008-09 and FY 2009-10 (Rs. Crore)

Particulars	FY 2008-09	FY 2009-10
	Petition	Petition
Lease/ Rent	9.95	10.64
Insurance	5.73	6.13
Revenue Stamp Expenses Account	0	0
Telephone, Postage, Telegram & Telex Charges	0.97	1.03
Incentive & Award To Employees/Outsiders	0.05	0.06
Consultancy Charges	2.8	3
Technical Fees	0.69	0.74
Other Professional Charges	0.02	0.02
Conveyance And Travelling	1.36	1.45
License and Registration Fees	0.01	0.01
Vehicle Expenses (Other Than Trucks And Delivery Vans) Vehicles Running Expenses Petrol And Oil	0.07	0.08
Hiring Of Vehicles	3.18	3.4
Total Administrative Expenses	24.83	26.56
Legal Charges	1.05	1.12
Auditor's Fee	0.19	0.2
Material Related and Other Expenses	0.38	0.41
Grand Total Charges	**26.45**	**28.30**

Commission's views

The Commission has observed that major reason for increase in A&G expenses for FY 2007-08 was insurance expenses. In the absence of transfer scheme, the Commission has considered the allocation of A&G expenses for FY 2007-08 as submitted by the companies in the petition. The Commission has projected the employee expenses for FY 2009-10 considering the FY 2007-08 expenses as base, and based on the following assumptions.

The Commission is of the view that, CSPGCL has selectively adopted the approach based on CERC discussion paper of 2003. The new CERC Tariff Regulations for the period FY 2009-10 to FY 2013-14 has since been notified which specifies the norms for overall O&M expenses and not component wise norms. The norms of entire O&M expenses for CSPGCL stations need to be framed during MYT order after finalisation of the Transfer Scheme.

For FY 2008-09 and FY 2009-10, the Commission has considered an increase of 6.04% on account of inflation over the actual A&G expenses for FY 2007-08, based on the increase in Wholesale Price Index (WPI) and Consumer Price Index (CPI). The Commission has considered the point to point inflation over WPI numbers (as per Office of Economic Advisor of Govt. of India) and CPI numbers for Industrial Workers (as per Labour Bureau, Government of India) for a period of 3 years, i.e., FY 2006-07 to FY 2008-09 (upto December 2008), to smoothen the inflation curve. The Commission has considered a weight of 60% to WPI and 40% to CPI, based on the expected relationship with the cost drivers. For FY 2008-09, the Commission has considered additional Rs 3 Crore for A&G expenses for new capacity added in FY 2007-08. **Based on these assumptions, the A&G expenses approved by the Commission for FY 2009-10 are given in Table below:**

Table 3.40
A&G Expenses for CSPGCL (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
A&G Expenses	28.30	26.14

3.4.4.3 Repair and Maintenance (R&M) expenses

CSPGCL has submitted actual R&M expenses for CSEB as a whole for FY 2007-08 and apportioned among the three functions based on the R&M expenses allocated to the particular function for which these have been incurred. The common expenses have been allocated amongst the three functions based on their fixed assets. The ratio for this division is 75.11%, 5.97% and 18.92% for Generation, Transmission and Distribution respectively.

Table 3.41

R&M Expenses of erstwhile CSEB for FY 2007-08 (Rs. Crore)

S. No	Particulars	FY 2007-08	
		Approved	Actual
1	Plant and Machinery	-	136.66
2	Building		13.96
3	Civil Works		7.84
4	Hydraulic Works		1.53
5	Lines, Cables Net Works etc.		16.93
6	Vehicles		3.19
7	Furniture and Fixtures		0.06
8	Office Equipments		1.13
9	Station Supplies		0.00
10	OtherCredits to R&M Charges		-2.14
	Total	**142.4**	**179.15**

Table 3.42

Allocation of R&M Expenses (Rs. Crore)

Function	R&M Expenses		GFA	
	FY 2007-08		FY 2007-08	
	Approved	Actual	Approved	Actual
Generation	66.05	134.56	1321.00	1328.50
Transmission	24.70	10.69	494.00	530.39
Distribution	51.65	33.90	1033.00	1007.66
Total	**142.40**	**179.15**	**2848.00**	**2866.55**

CSPGCL has projected gross R&M expenditure of Rs. 167.03 Crore and Rs. 188.06 for FY 2008-09 and FY 2009-10 respectively. The R&M expenses for FY 2008-09 have been calculated as 5% of the opening GFA. On the basis of norms and the previous 18 months WPI & CPI normal inflation rates have been considered by CSPGCL for the future years. Percentage of inflation considered over and above the norms is 7%. The head-wise R&M expenditure projected by CSPGCL for FY 2008-09 and FY 2009-10 is given in the table below:

Table 3.43

Table: R&M Expenses (Rs. Crore)

Particulars	FY 2008-09	FY 2009-10
	Petition	Petition
Plant and Machinery	144.14	162.29
Building	9.61	10.82
Civil Works	8.10	9.12
Hydraulic Works	1.90	2.14
Lines, Cables Net Works etc.	0.05	0.05
Vehicles	2.46	2.77
Furniture and Fixtures	0.03	0.03
Office Equipments	0.84	0.95

Particulars	FY 2008-09	FY 2009-10
	Petition	Petition
Station Supplies	0.00	0.00
Other Credits to R&M Charges	-0.11	-0.13
Issue from stores	-	-
Other handling of fuel related expenses	-	-
Total	**167.03**	**188.06**

Commission's views

The Commission in its previous orders has approved R&M Expenses as 5% of opening GFA. CSPGCL in addition to 5% of GFA has proposed 7% increase in R&M expenses for FY 2009-10. The Commission will specify O&M norms for CSPGCL stations in the MYT order after finalization of Transfer Scheme. For FY 2009-10, the Commission has considered R&M Expenses @ 5% of opening GFA as on March 31, 2007 (Rs. 1328.50 crore) and for new stations i.e. Korba East Extension and further capitalization, the Commission has considered R&M expenses @ 3% of opening GFA (Rs. 2194 crore) as these are the new assets and will require lesser R&M. **Based on these assumptions, the R&M expenses approved by the Commission for FY 2009-10 are given in Table below:**

Table 3.44

Gross R&M Expense (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
R&M Expenses	188.06	135.92

3.4.5 Overview: Operation and Maintenance (O&M) expenses

The O&M expense is the summation of the employee expenses, A&G expenses and R&M expenses as shown in the table below:

Table 3.45

Gross O&M Expenditure (Rs. Crore)

Particulars	FY 2009-10 (Approved)	FY 2009-10 (Approved Removing Pension Fund)
Employee Expenses	267.10	189.55
A&G Expenses	26.14	26.14
R&M Expenses	135.92	135.92
Total	**429.16**	**351.61**
Rs. Lacs /MW	**22.30**	**18.27**

The norm specified by CERC in its Tariff Regulations, 2009, towards O&M expenses for coal based thermal power stations for FY 2009-10 is Rs. 18.20 lacs/MW for 200/210/250 MW sets. As all the units of CSPGCL stations are less than 250 MW size, the O&M expenses approved by the Commission for FY 2009-10 excluding the Pension fund provisions are comparable with the CERC norms.

3.4.6 Capital Investment Plan for FY 2008-09 and FY 2009-10

CSPGCL has submitted the capital investment plan for new generation plants as well as renovation and modernization of the existing plants for life extension. The total capital investment proposed by CSPGCL for new generation plants for FY 2008-09 and FY 2009-10 is Rs. 579.43 Crore and FY 1586.36 Crore respectively as detailed in table below:

Table 3.46

Capital Investment Plan (Rs. Crore)

Project	Capacity	Project Cost	FY 2008-09 Petition	FY 2009-10 Petition
Korba West(1*500 MW)	1 x 500 MW	2750.00	175.00	456.68
Marwa	2 x 500 MW	5544.71	350.00	886.75
Korba Mini Hydel	0.85 MW	4.52	4.13	0.00
IFFCO–JV project (26% of 30 % of project cost)	2 x 660 MW	6253.70	27.30	147.93
Korba South	2 x 500 MW	5200.00	15.00	85.00
Other Investments		28.00	8.00	10.00
Total Investment			**579.43**	**1586.36**

CSPGCL has submitted that Korba West (1 X 500 MW) is expected to be commissioned in FY 2012-13, Marwa (2 X 500 MW) is expected to be commissioned in FY 2012-13, IFFCO-JV (2X660 MW) is expected to be commissioned in FY 2012-13 and Korba South (2 X 500 MW) is expected to be commissioned in FY 2013-14.

CSPGCL has further submitted that as it has decided to develop all hydro projects in future under the tariff based competitive bidding route, no hydro projects are being proposed by CSPGCL in its investment plan.

The other investments of CSPGCL consists of investments related to development of two coal blocks, Paturai and Gidhmuri captive coal block and for expenditure related to hydro projects which would be developed under competitive bidding route.

CSPGCL has proposed to fund Korba West, Marwa and Korba South projects with a Debt: Equity funding ratio of 90:10. However, in case of IFFCO-JV the projected expenditure of Rs. 175.23 Crore is the actual equity contribution to be made by CSPGCL in the joint venture project during FY 2008-09 and FY 2009-10.

The investments proposed by CSPGCL under Renovation & Modernisation, Capital (O&M) projects of existing stations and civil projects in FY 2008-09 & FY 2009-10 is as given below:

Table 3.47
Projected capital expenditure for Renovation & Modernization, Capital (O&M) projects and Civil projects from FY 2008-09 & 2009-10 (Rs. Crore)

Particulars	FY 2008-09	FY 2009-10
	Petition	Petition
Renovation & Modernisation		
Modernization of Korba East (Power House II & III)	26.11	53.12
R&M of Korba West	50.25	176.97
sub-total	**76.36**	**230.09**
Capital O&M projects		
Korba East II and III (4x 50MW+ 2x 120MW)	19.42	53.01
Korba East Ext (2 x 250 MW)	2.05	11.25
Korba West (4x 210MW)	55.83	130.57
sub-total	**77.3**	**194.83**
Civil Projects		
Civil Projects	44.48	72.14
Total Cost	**198.14**	**497.06**

CSPGCL has submitted that it proposes to execute the R&M projects with debt: equity ratio of 70:30, while the Capital (O&M) and civil projects would be funded with 100% equity.

Projected Capitalisation during FY 2008-09 and FY 2009-10

CSPGCL has submitted that for Capital O&M expenditure, 80% of the expenditure in any year has been estimated to capitalize in that year and 20% in the subsequent year. For Renovation & Modernization and Civil Projects, 100% of the expenditure in that year is capitalized. CSPGCL has projected the following level of capitalisation of investment in FY 2008-09 and FY 2009-10:

Table 3.48

Projected Capitalization in FY 2008-09 and FY 2009-10 (Rs. Crore)

Particulars	FY 2008-09	FY 2009-10
	Petition	Petition
Renovation & Modernisation		
Modernization of Korba East (Power House II & III)	26.11	53.12
R&M of Korba West	50.25	176.97
sub-total	**76.36**	**230.09**
Capital O&M projects	**61.84**	**171.32**
Civil Projects	**44.48**	**72.14**
Total Capitalisation	**182.68**	**473.55**

Commission's views

The CSPGCL's capital expenditure plans, the funding for the same, preparedness for undertaking the same, orders placed, etc., were discussed with the CSPGCL's officers, to assess whether the high level of capital expenditure indicated by CSPGCL for FY 2008-09 and FY 2009-10 could be undertaken, and whether the required funds are tied up.

New Projects

CSPGCL has submitted the preparedness for investment in new projects as follows:

- Schedule given by Main Plant Supplier for Korba West TPS and Marwa TPS
- Loan Sanction – Korba West (1*500 MW) – Rs. 2078 Crore (by PFC)
  Marwa (2*500 MW) – Rs. 3756 Crore (by PFC)
- Release of 15% advance payment towards supply of BTG, Electricals and C&I for Marwa TPS (2*500 MW) – Rs. 276.75 Crore and Korba West
- Bids invited through International Competitive Bidding by CSPGCL for Balance of Plant Package on EPC contract basis for 2*500 MW Marwa TPS and 1*500 MW Korba West
- CSPGCL has submitted the DPR for following projects
  - ✓ DPR of 2*500 MW Marwa TPS and 2*500 MW Korba South TPS, however the Project cost estimated in DPR are under revision

The Commission has directed CSPGCL to submit the Memorandum of Understanding (MoU) or Power Purchase Agreement (PPA) for sale of power from new generating stations. However, CSPGCL has not yet submitted any document in this regard. The Commission is of the view that in the absence of MoU or PPA for new projects, the justification of the projects based on projected demand supply position of CSPDCL needs to be ascertained before considering the capital investments as part of ARR and tariff approval. However as the Capital investment for Korba West and Marwa were considered in previous tariff order and works on these projects have started prior to unbundling of CSEB, the Commission has considered the investments proposed during FY 2009-10 in these projects. The investment in any other new project can only be considered based on MoU/PPA signed with CSPDCL and analysis of demand supply requirement. The Commission is of the view that capital Investments in IFFCO JV cannot be considered while determining the tariff as this is the equity investment of CSPGCL. As regards the other project development expenditure for developing new projects, the Commission is of the view that such expenditure needs to be allocated to specific projects for which such expenditure is incurred and cannot be considered as part of ARR determination. **Hence the capital expenditure for new projects considered by the Commission for FY 2008-09 and FY 2009-10 is shown in the table below:**

Table 3.49

Capital Investment for new projects (Rs. Crore)

Project	Capacity	Project Cost	FY 2008-09		FY 2009-10	
			Petition	Commission	Petition	Commission
Korba West(1*500 MW)	1 x 500 MW	2750.00	175.00	175.00	456.68	456.68
Marwa	2 x 500 MW	5544.71	350.00	350.00	886.75	886.75
Korba Mini Hydel	0.85 MW	4.52	4.13	4.13	0.00	0.00
IFFCO–JV project (26% of 30 % of project cost)	2 x 660 MW	6253.70	27.30	0.00	147.93	0.00
Korba South	2 x 500 MW	5200.00	15.00	0.000	85.00	0.00
Other Investments		28.00	8.00	0.00	10.00	0.00
Total Investment			**579.43**	**529.13**	**1586.36**	**1343.43**

<u>Renovation and Modernization and other works for Existing Stations</u>

During technical validation sessions, the Commission has directed CSPGCL to submit the details and preparedness for executing Renovation and Modernization in FY 2009-10. CSPGCL has submitted details of proposed expenditure towards R&M works for Korba East and Korba West for FY 2009-10 as shown in the table below.

Table 3.50

Renovation and Modernization and Other works for FY 2009-10 (Rs. Crore)

S No.	Scheme	Project Cost	Petition Exp. 2009-10
A	**KTPS Korba East**		
1	Refurbishment of 2*120 MW units of Korba East	134.00	16.00
2	Dry Fly ash disposal system - Korba East	19.37	2.37
3	Supply ET & c of High Conc. Slurry Disposal system for 4*50 MW and 2*120 MW units of Korba East	69.00	20.00
4	Fire Protection system for transformer & cable vault gallaries of 4*50 MW and 2*210 MW units of KE	4.25	0.25
5	Supply erection, testing & commissioning of Gravimetric Raw Coal Feeders at unit No 6 of KTPS, Korba East	5.00	2.00
6	Consultancy charges for various schemes	2.00	1.00
7	Fire Protection system for CHP of 4*50 MW and 2*210 MW units of KE	7.50	6.50
8	Others	5.00	5.00
	sub-total		**53.12**
B	**HTPS Korba West**		
1	Refurbishment of 4*210 MW units of Korba West	1050.00	85.00
2	Dry Fly ash disposal system - Korba West	39.54	9.54
3	Supply, erection, testing & comm. Of TAS & BAS PRDS System for 4 *210 MW units of Korba West	13.40	5.00
4	Replacement of worn out feed water control value for 4*210 MW units of Korba West	2.49	1.39
5	Replacement of worn out RH and SH spray control valve for unit No. 3 & 4 of 4*210 MW units of Korba West	1.13	0.53
6	Replacement of worn out RH and SH spray control valve for unit No. 1 & 2 of 4*210 MW units of Korba West	1.26	1.26
7	Replacement of Rotary APH of unit No. 1&2 of 4*210 MW units of Korba West	32.14	3.50
8	Consultancy charges for various schemes	1.50	1.00
9	Supply ET & c of High Conc. Slurry Disposal System for 4*210 MW units of Korba West	92.50	64.75
10	Others	5.00	5.00
	sub-total		**176.97**

CSPGCL is yet to submit cost benefit analysis towards refurbishment works of Korba Korba West. The Commission is of the view that refurbishment (Renovation and Modernisation) works for Korba West are unlikely to materialise in FY 2009-10 as even DPRs are yet to be prepared. Further as per Regulation 10 of CERC (Terms and Conditions of Tariff) Regulations, 2009, the generating company is required to submit an applicabtion before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level and estimated completeion cost. Hence, the Capital Expenditure proposed on refurbishment of Rs. 85 Crore for Korba West cannot be allowed at this stage and the Commission directs CSPGCL to submit a Detailed Project Report towards Renovation and Modernisation for prior approval.

As regards to proposed expenditure of Rs 16 Crore towards refurbishment of 2X120 MW units of Korba East, CSPGCL has submitted though the work has been completed, however, certain extra claims raised by M/S BHEL are yet to be settled and a high level committee has been formed to settle this pending issue. The Commission is of the view that till this matter of additional claim is settled it will not be appropriate to allow this expenditure. As regards to other works proposed by CSPGCL, such as fly ash disposal system, slurry disposal system, etc the Commission has considered the same. CSPGCL has proposed the other miscellaneous Capital Expenditure of Rs. 5 Crore each for Korba East II & III and Korba West for FY 2009-10 and the same has not been considered by the Commission as the estimates of other works proposed by CSPGCL are budget estimates and includes some provision towards contingency.

Capital (O&M) Expenditure and Civil Works

During the technical validation sessions, the Commission has directed CSPGCL to submit actual Capital (O&M) expenditure and Civil Projects expenditure for nine months of FY 2008-09. The Capital (O&M) expenditure for nine months of FY 2008-09 submitted by CSPGCL is Rs. 41.18 Crore against the total estimated expenditure of Rs 77.30 Crore for FY 2008-09. Considering the actual expenditure during first nine months, the Commission has considered the proposed Capital (O&M) expenditure of Rs. 77.30 Crore for FY 2008-09 subject to truing up. For FY 2009-10, the Capital (O&M) expenditure proposed by CSPGCL is on higher side and the Commission on provisional basis has considered 50% of proposed Capital (O&M) expenditure.

The Civil Projects expenditure for nine months of FY 2008-09 submitted by CSPGCL is Rs. 32.98 Crore against the total estimated expenditure of Rs 44.48 Crore for FY 2008-09. Considering the actual expenditure during first nine months, the Commission has considered the proposed civil projects expenditure of Rs. 44.48 Crore for FY 2008-09 subject to truing up. For FY 2009-10, civil projects expenditure proposed by CSPGCL is on higher side and the Commission on provisional basis has considered 50% of proposed civil projects expenditure.

The Commission would like to highlight that though for the purpose of estimation of ARR and determination of tariff the Commission has considered the capital expenditure towards other works, Capital (O&M) expenditure and civil projects as discussed above, however, the same should not be considered as approval of capital expenditure by the Commission. **The Commission directs CSPGCL to submit the scheme-wise details of the capital expenditure for each scheme above Rs. 5 Crore for the approval of the Commission.**

Table 3.51

Capital expenditure for Renovation & Modernization, Capital (O&M) projects and Civil projects from FY 2008-09 & 2009-10 (Rs. Crore)

Particulars	FY 2008-09		FY 2009-10	
	Petition	Commission	Petition	Commission
Renovation & Modernisation				
Modernization of Korba East (Power House II & III)	26.11	26.11	53.12	32.12
R&M of Korba West	50.25	50.25	176.97	86.97
sub-total	**76.36**	**76.36**	**230.09**	**119.09**
Capital O&M projects				
Korba East II and III (4x 50MW+ 2x 120MW)	19.42	-	53.01	-
Korba East Ext (2 x 250 MW)	2.05		11.25	
Korba West (4x 210MW)	55.83		130.57	
sub-total	**77.3**	**77.30**	**194.83**	**97.42**
Civil Projects				
Civil Projects	44.48	44.48	72.14	36.07
Total Cost	**198.14**	**198.14**	**497.06**	**252.58**

The means of Finance for the capital expenditure approved by the Commission for FY 2008-09 and FY 2009-10 is given in the table below:

Table 3.52

Means of Finance for FY 2008-09 and FY 2009-10 (Rs. Crore)

	FY 2008-09		FY 2008-09		FY 2009-10		FY 2009-10	
	Petition		Approved		Petition		Approved	
Particulars	**Debt**	**Equity**	**Debt**	**Equity**	**Debt**	**Equity**	**Debt**	**Equity**
New Projects	521	58	476	53	1428	159	1209	134
R&M	53	129	139	59	161	312	177	76
Total	**575**	**187**	**615**	**112**	**1589**	**471**	**1386**	**210**

The Commission has considered the new loans based on the capital expenditure considered for estimation of ARR. The Commission has considered Debt: Equity Ratio of 90:10 for new projects as proposed by CSPGCL and 70:30 for R&M Projects, Capital O&M and Civil projects. Based on the revised capital expenditure, the new loans considered by the Commission for FY 2008-09 and FY 2009-10 are Rs. 615 Crore and Rs. 1386 Crore respectively instead of Rs. 575 Crore and Rs. 1589 Crore respectively as proposed by CSPGCL.

The Commission has approved the Capitalization for FY 2008-09 and FY 2009-10 as per capital expenditure approved for FY 2008-09 and FY 2009-10 and using the same approach proposed by CSPGCL as shown in the table below:

Table 3.53
Capitalization in FY 2008-09 and FY 2009-10 (Rs. Crore)

Particulars	FY 2008-09		FY 2009-10	
	Petition	Commission	Petition	Commission
Renovation & Modernisation and Other Works				
Korba East (Power House II & III)	26.11	26.11	53.12	32.12
Korba West	50.25	50.25	176.97	86.97
sub-total	**76.36**	**76.36**	**230.09**	**119.09**
Capital O&M projects	**61.84**	61.84	**171.32**	93.39
Civil Projects	**44.48**	44.48	**72.14**	36.07
Total Capitalisation	**182.68**	**182.68**	**473.55**	**248.55**

3.4.7 Interest and Finance charges

CSPGCL has submitted that loans that could identified to a particular functional wing of G, T or D of erstwhile CSEB has been allocated to the respective functional company. However, the remaining loans have been trifurcated based on the GFA across the three functional companies.

Till the end of FY 2007-08, the interest obligations arising to the erstwhile CSEB were on account of the following loans:

i) Loan for Korba East taken from REC
ii) Loan from PFC for various Generation & Transmission schemes
iii) Loans from the state govt
iv) SLR and PP bonds
v) Loan for APDRP scheme
vi) Loans from Commercial bank – SPA
vii) Loans from various other sources

During the technical validation session, the Commission had directed CSPGCL to identify loans as per FY 2007-08 provisional accounts of CSEB for Generation, Transmission and Distribution function and apportionment of common loans alongwith basis of apportionment.

In reply, CSPGCL has submitted the details of loan for each company as follows:

Table 3.54

Allocation of loans of erstwhile CSEB

Particulars	Total loan as on March 31, 2008	Allocation of Loans		
		CSPGCL	CSPTCL	CSPDCL
State Government Loan	908.16	557.42	126.04	224.67
Public Bonds (guaranteed by State Government)	213.2	130.86	29.59	52.74
RE Debentures	82.57	50.68	11.46	20.42
Loan received under CSS for modernisation and renovation & APDRP scheme	87.86			87.86
Loan from PFC, New Delhi	235.83		235.83	
Loan from REC	1354.42	1354.42		
Others	4.62	2.82	0.63	1.15
Total	**2886.66**	**2096.20**	**403.55**	**386.84**

CSPGCL has projected interest and finance charges for FY 2009-10 as Rs.362.89 Crore. The break-up of the interest and financing charges is as given in the table below:

Table 3.55

Projection of interest and finance charges for FY 2009-10 (Rs. Crore)

Sr No.	Loan Details	FY 2009-10 Petition
1	Interest on Bonds	46.37
2	Perpetual loan	9.21
3	Interest on loan by Western Coal Limited	7.81
4	REC Loans	152.84
5	Interest on Security Deposit	0.86
6	Financing Charges	7.23
	Grand Total	224.32
	Interest on new loans in FY 2008-09	138.57
	Gross Interest Charge	**362.89**
	Less: Interest & Finance Charges Capitalised	122.06
	Net Interest & Finance Charges	**240.83**

CSPGCL has submitted that the gross interest charges in FY 2009-10 are likely to increase substantially due to the fact that CSPGCL has embarked on major capital investment programme.

Commission's views

In the absence of allocation of assets and liabilities among the successor companies of erstwhile CSEB, the Commission has considered the reconciliation of the opening balance of loan as submitted by the CSPGCL for projecting the interest on existing loans.

The Commission has considered an interest rate of 11% as taken by CSPGCL on the new loans taken during the year, for determining the interest expenditure in FY 2008-09 and FY 2009-10. In case of any variation in the interest rate vis-à-vis the approved interest rate, the same will be considered at the time of truing up of the interest expenditure, since interest cost is a pass-through expense. The Commission has considered interest on new loans for half of the year as the capital expenditure and loan disbursements during the year will be spread across the year. **The expenditure on interest and finance charges sought by CSPGCL and approved by the Commission is given in the table below:**

Table 3.56

Interest and Finance Charges for FY 2009-10 (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Interest on Existing Loans incl REC Extn Receipt	216.22	216.22
Interest on Security Deposit	0.86	0
Financing charges	7.81	7.81
Interest on New Loan	138.90	143.9
Total Interest and Financing Charges	**363.79**	**367.89**

3.4.8 Capitalization of Interest and O&M expenses

The O&M expenses incurred towards addition of capital assets has to be capitalised and added to the asset value, and charged off through depreciation over the life of the asset. Similarly, the interest expenditure during the construction period (IDC) has to be capitalised and added to the asset value.

CSPGCL has projected a total capitalisation of Rs. 41.81 Crore and Rs. 138.78 Crore for FY 2008-09 and FY 2009-10 respectively, comprising interest capitalisation of Rs. 26.31 Crore and Rs. 122.06 Crore respectively, and the balance made up of capitalised O&M expenses.

Commission's views

The Commission has accepted the methodology used by CSPGCL to determine the level of capitalisation of O&M expenses and interest expenses. **The amount of capitalisation projected by CSPGCL and the capitalisation approved by the Commission for FY 2009-10 is given in the following table:**

Table 3.57

Capitalisation of O&M expenses (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
O&M expenses Capitalised	16.72	14.45
Net O&M expenses	510.69	414.71

Table 3.58

Capitalisation of Interest Expenses (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Interest Capitalised	122.06	126.42
Net Interest and Finance Charges	241.73	241.47

3.4.9 Depreciation

CSPGCL has submitted that the assets of CSEB are very old, and hence for a number of assets that were added several years earlier, the cumulative depreciation has reached 90% and no further depreciation is chargeable on them. CSPGCL added that it has considered depreciation on the assets capitalized during the year on pro-rata basis for the days of operation in accordance with the Commission's tariff regulations. Due to this, the amount of depreciation for new assets added during the year is also chargeable. Hence, the depreciation chargeable appears to have on increasing trend, despite reduction in the applicable rate. Further in FY 2007-08, capitalization of Korba East Extension Thermal Power Plant has been considered which has resulted in the increase in gross block. The petitioner further submitted that the weighted average rate of depreciation works out to 3.5%. The depreciation claimed by CSPGCL for FY 2008-09 and FY 2009-10 is shown in the table below:

Table 3.59

Depreciation projected by CSPGCL for FY 2008-09 and FY 2009-10 (Rs. Crore)

Particulars		FY 2008-09	FY 2009-10
GFA	Opening	3340.53	3660.21
	Addition	319.68	597.64
	Closing	3660.21	4257.85
Depreciation	Opening Accumulated	765.73	861.29
	Due during the year	**95.55**	**107.24**
	Closing Accumulated	861.29	968.53

Commission's views

The Commission has examined the computations of depreciation submitted by CSPGCL The depreciation has been computed on Straight Line Method (SLM) basis as per the rates specified in the Regulations. The Commission has considered addition to assets during FY 2008-09 and FY 2009-10 as per the capital expenditure and capitalisation as discussed in previous sections. The Commission has observed that though the petitioner in its petition has considered the asset addition of Rs. 319.68 crore, however the same does not match with the detailed break up given in Form 7, which indicates the asset capitalization of Rs. 221.27 crore in FY 2008-09. Based on capitalization figures as given in Form 7, the weighted average depreciation rate works out to be 2.91%. The depreciation rate of 2.91% appears reasonable considering that some of the assets are very old. Therefore, the Commission has considered the average depreciation rate of 2.91% for computing the depreciation amount for FY 2009-10. **The depreciation approved by the Commission for FY 2009-10 is given in the following table:**

Table 3.60

Depreciation for FY 2009-10 (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Opening GFA	3561.80	3523.21
Additions	255.18	248.55
Closing GFA	3816.98	3771.77
Accumulated Depn at beginning of year	861.29	860.75
Depreciation During the year	**107.24**	**106.02**
Accumulated Depn at end of year	968.53	966.77
Depn Rate	2.91%	2.91%
Accumulated Depn as % of GFA	24%	24%

3.4.10 Reasonable Return

CSPGCL has submitted that for the equity contribution, erstwhile CSEB was eligible for returns of 14% on the equity contribution for projects where equity is either less than or 30% of project cost and in case of projects where equity contribution is more than 30%, the balance equity contribution was eligible for a return of 10% being the interest cost of debt. In CSPGCL the equity contribution is less than the normative limit of 30% for expenditure in new generation projects and R&M projects. However, for capital O&M and civil projects, the projects would be executed on 100% equity, which does not meet the normative limit of 30%. Based on the provisional account for FY 2007-08 and the principles adopted by the Commission in provision of reasonable return in the tariff order for FY 2007-08, the reasonable return of CSPGCL for FY 2007-08 is computed in two parts.

Table 3.61

Reasonable Return for FY 2007-08 for CSEB (Rs. Crore)

Particular	Amount (in Rs. Crore)
RoE as on 31 March 2005	156.59
Total RoE on Equity Capex	164.16
(less) RoE on CWIP	-143.61
ROE on works Capitalized in 2007-08	73.53
Total Reasonable Return for FY 2007-08 of erstwhile CSEB	**250.68**

This reasonable return of CSEB would be trifurcated across Generation, Transmission and Distribution wing of erstwhile CSEB in proportion to the GFA of the three wings. Thus the reasonable return of CSPGCL is Rs. 153.85 Crore for FY 2007-08 (61.37% of the total reasonable return).

CSPGCL has submitted the reasonable return computations for FY 2008-09 and FY 2009-10 as follows:

Table 3.62

Reasonable Return for FY 2008-09 and FY 2009-10 for CSPGCL (Rs. Crore)

Particulars	As on 31 March 2005	During the Period till March 2008	Total till March 2008	During the Period till March 2009	Total till March 2009
GFA	889.79	2450.74	3340.54	2672.01	3561.80
CWIP	589.44	-451.62	137.81	104.68	694.12
Sub Total	1479.23	1999.12	3478.35	2776.69	4255.92
Grant	0.04	0.00	0.04	0.00	0.04
Capital Cost of Project	1479.19	1999.12	3478.31	2776.69	4255.88
Debt	936.96	1004.79	1941.75	1544.24	2481.21
Equity	542.22	994.33	1536.55	1232.45	1774.67
Equity (%)	36.66%	49.74%	44.18%	44.39%	41.70%
RoE as on 31 March 2005	74.35		74.35	0.00	74.35
RoE on Normative Equity		83.96	83.96	145.62	145.62
RoE on Remaining Equity		43.41	43.41	43.94	43.94
Total RoE on Equity Capex			201.72		263.91
RoE on CWIP			7.99		43.04
Reasonable Return			**193.73**		**220.86**

Table 3.63

Reasonable Return for Capitalization during FY 2008-09 and FY 2009-10 for CSPGCL

(Rs. Crore)

Particulars	FY 2008-09	FY 2009-10
Equity Capitalisation during the year	133.36	312.49
Total Capitalisation	221.26	508.01
Share of Capitalisation	60.27%	61.51%
Return on normative Equity capitalisation	4.65	13.32
Return on remaining equity	3.68	8.80
Total Return for capitalisation during the year	**8.33**	**22.13**

Thus the total Reasonable return due to CSPGCL is Rs. 202.06 Crore for FY 2008-09. CSPGCL has submitted that the CERC has issued new regulations, namely CERC (Terms and conditions of Tariff) Regulations, 2009 for the period FY 2009-10 to FY 2013-14. The new tariff regulations have provided for Return on equity of 15.5% for Generation companies from FY 2009-10 onwards. Also, CSPGCL would be liable to pay Minimum Alternate Tax at the rate of 11.33% on the reasonable return to e earned in FY 2009-10. In this regard the CERC Tariff Regulations, 2009 has provided for grossing-up the reasonable return at 17.481% as provided at Regulation 15 of the Tariff Regulation, 2009. CSPGCL has proposed the reasonable return of 17.481% for FY 2009-10 and thus the reasonable return for FY 2009-10 for CSPGCL is estimated at 242.99 Crore.

Commission's views

During the technical validation sessions, the Commission had directed the CSPGCL to submit the revised computation of reasonable return for FY 2007-08, FY 2008-09 and FY 2009-10 on account of the error on the allocation of capital liabilities and payment due on capital liabilities. CSPGCL has submitted the revised workings of reasonable return.

The Commission has computed the reasonable return for erstwhile CSEB on opening equity for FY 2008-09 in accordance with Capital Base methodology adopted in previous tariff orders since the Transfer Scheme and Opening Balance sheets have not finalized. The Commission has allocated the reasonable return on opening equity for FY 2008-09 amongst the three companies in proportion of Gross Fixed Assets. The detailed computations of reasonable return for FY 2007-08 are given below.

Table 3.64

RoE for CSEB as a whole on opening equity for FY 2008-09 (Rs. Crore)

S.No	Particulars	Up to 31.03.05	From 01.04.05 to 31.03.08	Total, as on 31.03.08
	Capital Expenditure			
1	GFA	1910.45	3532.57	5443.02
2	CWIP	1195.50	328.43	1523.93
	Sub-total	3105.95	3861.00	6966.95
3	Less: Consumer Contribution /Capital Grants	-441.04	-791.46	-1232.50
4	Capital Cost of Project	2664.91	3069.54	5734.45
	Means of Finance			
5	Debts	1546.40	1440.30	2986.70
6	Debt %	0.58	0.47	0.52
	Equity			
7	Equity Share capital	23.12	0.00	23.12
8	Reserves/Surplus	1024.67	1138.38	2163.05
9	Internal Accruals	1307.65	-133.03	1174.62
10	Net Worth	2355.44	1005.35	3360.79
11	Investments	998.53	-401.10	597.43
12	Other Assets	1.46	7.36	8.82
13	Net Current Assets	236.95	-235.50	1.45
14	Net Equity invested in capex	1118.50	1634.59	2753.09
15	Equity%	42%	53%	48%
16	Return @14% on Rs. 1118.5 crore, on the total net equity invested in capex till 31.3.05	156.59		156.59
17	Return on equity employed in capex on or after 1.4.05 (Rs. 1634.59 crore) 1. @ 14% on Rs. 920.862 crore normative equity, i.e., 30% of capital cost of the project		128.92	128.92
18	8.5% on Rs. 713.73 crore (1634.59-920.68) equity employed in capex over and above the normative equity		60.67	60.67
19	Gross Total Return on Equity for FY 2007-08 on the basis of above total net equity invested in capital expenditure including CWIP	156.59	189.59	346.18
20	Less: out of the above gross total, Return on equity portion attributable to CWIP (346.8/6966) x 1523.93			92.00
21	Reasonable Return on equity allowable for FY 2007-08 for the whole CSEB on the net equity employed in capital expenditure excluding the portion attributable to CWIP			**254.18**

This reasonable return on opening equity for FY 2008-09 is trifurcated across Generation, Transmission and Distribution wing of erstwhile CSEB in proportion to the GFA of the three wings.

Table 3.65

Allocation of RoE for FY 2007-08 (Rs. Crore)

Particulars	Generation	Transmission	Distribution
Return on Opening Equity	156.00	35.30	62.89
GFA %	61.37%	13.89%	24.74%

Table 3.66

Computation of Return for FY 2009-10 on Equity for Projects Capiatalised during FY 2008-09 and FY 2009-10 (Rs. Crore)

Year	Capitalization Amount	Equity	No. of Days	Return
FY 2008-09	182.68	54.8	365	7.67
FY 2009-10	248.55	74.57	183	5.22

As regards CSPGCL's plea for the revised rate of returns of 15.5% in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2009, the Commission is of the view that at this stage when the opening balance sheets of the companies are yet to be notified, it is not possible to assess the actual equity contribution by CSPGCL. The total equity share capital of erstwhile CSEB as on march 31, 2008 indicated in the provisional accounts is Rs only 23.12 Crore. The Commission in its previous orders have adopted the Capital Base approach for allowing the reasonable return to erstwhile CSEB. In the absence of opening equity share capital of three companies, the Commission in this order, would like to continue with the methodology (i.e. Capital Base approach for investments made till FY 2007-08) and principles (i.e. rate of 14%) adopted in previous orders for estimating the returns. The Commisison will take a view on higher rate of return on equity in accordance with CERC Regulations, referred to above during the next year's ARR and tariff determination process once the opening balance sheets of the companies are finalised and the information on equity share capital of three companies is avaiable. The Commission for FY 2009-10 has computed the return by considering the reasonable return allocated to CSPGCL for investments made till FY 2007-08 and by allowing the return on normative equity funding considered for capital expenditure during FY 2008-09 and FY 2009-10. **The reasonable return allowed by the Commission for FY 2009-10 is given in following Table:**

Table 3.67

Reasonable Return for FY 2009-10 for CSPGCL (Rs. Crore)

Particulars	FY 2009-10
	Approved
RoE for investments till 2007-08	156.01
Return on Equity Investments during FY 2008-09 and FY 2009-10	12.89
Total Return	**168.90**

3.4.11 Provision for Taxes

CSPGCL has claimed Rs. 3.91 crore as provision for income tax for FY 2009-10.

Commission's views

Regulation 27 of the Commission's Tariff Regulations stipulate that income tax, if actually liable to be paid, shall be limited to tax on return on equity allowed, excluding incentives.

CSPGCL has considered the Income tax exemption and has sought the Commission's approval only for the Fringe Benefit Tax (FBT) of Rs. 3.91 crore payable by CSPGCL. Hence, the Commission approves the tax liability for CSPGCL as Rs. 3.91 crore for FY 2009-10.

3.4.12 Non-tariff Income

CSPGCL has projected non-tariff income Rs. 45.99 Crore for FY 2009-10. Non tariff income comprises mainly of income from all sources other than sale of electricity, viz., interest on fixed deposits, meter rent, delayed payment charges, miscellaneous receipts, income from trading, etc. The non tariff income of CSPGCL is given in the table below:

Table 3.68

Non-tariff income projected by CSPGCL for FY 2007-08 (Rs. Crore)

S. No	Particulars	FY 2007-08		FY 2008-09	FY 2009-10
		Approved	Provisional	Estimated	Petition
A	**Income from Investment, Fixed & Call Deposits**				
1	Interest Income from Investments	-	0.88	0.96	1.06
2	Interest on fixed deposits		13.82	15.20	16.72
3	Interest from Banks other than Fixed Deposits		0.00	0.00	0.00
4	Interest on any other items		1.04	0.29	0.31
	Sub-Total		15.73	16.45	18.09

S. No	Particulars	FY 2007-08		FY 2008-09	FY 2009-10
		Approved	Provisional	Estimated	Petition
B	**Other Non tariff Income**				
1	Interest on loans and Advances to staff		0.39	0.43	0.48
2	Interest on Loans and Advances to other Licensee		3.21	3.54	3.89
3	Interest on Advances to Suppliers / Contractors		0.05	0.05	0.06
4	Income from Trading (other than Electricity)		15.67	17.23	18.96
5	Gain (Loss) on Sale of Fixed Assets		0.00	0.00	0.00
6	Income/Fee/Collection against staff welfare activities		0.04	0.05	0.05
7	Revenue from surcharges for late payment		0.00	0.00	0.00
8	Miscellaneous receipts		3.69	4.06	4.46
	Sub-Total		23.05	25.36	27.90
	TOTAL	**30.82**	**38.79**	**41.81**	**45.99**

Commission's views

The Commission accepts the CSPGCL's projection of non-tariff income for FY FY 2009-10.

3.4.13 ARR of CSPGCL

Based on various elements of expenses and return, as discussed above, the summary of ARR of CSPGCL for FY 2009-10 as projected by CSPGCL and as approved by the Commission is given in the table below:

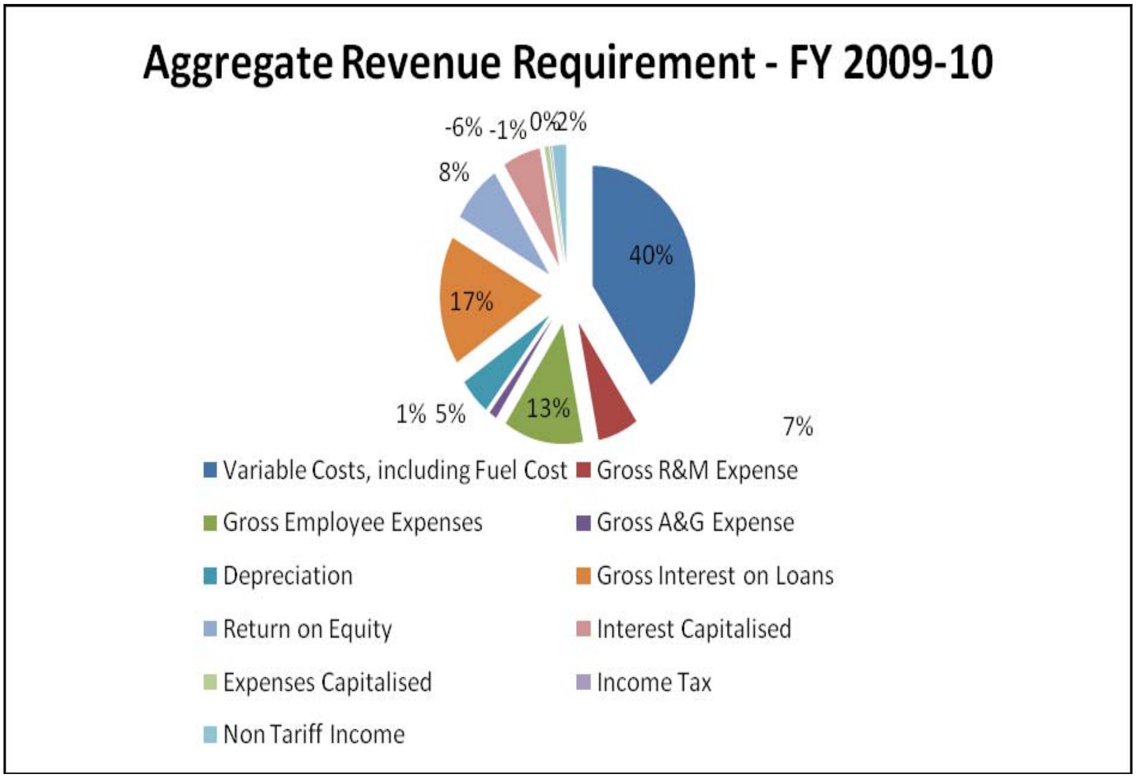
Table 3.69

ARR for CSPGCL for FY 2009-10 (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved by the Commission
Expenditure		
Variable Costs, including Fuel Cost	959.77	855.46
O&M expenses	527.41	429.16
R&M Expense	188.06	135.92
Employee Expenses	311.05	267.10
A&G Expense	28.30	26.14
Depreciation	107.24	106.02
Interest on Loans	362.89	367.89
Return on Equity	242.99	168.90
Less Capitalisation		
Interest Capitalised	-122.06	-126.42
Expenses Capitalised	-16.72	-14.45
Income Tax	3.91	3.91
Total Expenditure	**2065.42**	**1790.47**
Less Non Tariff Income	45.99	45.99
Annual Revenue Requirement	**2019.43**	**1744.48**

Particulars	FY 2009-10	
	Petition	Approved by the Commission
Net Generation (MU)	11739	12073
Average Cost of Generation (Rs./kWh)	1.72	1.44

The Commission approves the ARR for CSPGCL as Rs. 1744.48 Crore, as compared to Rs. 2019.43 Crore projected by CSPGCL for FY 2009-10. The primary difference is on account of the reduction in Variable Cost, O&M expenses and Return on Equity.



3.5 Truing Up for FY 2007-08

3.5.1 Background

The utility makes certain estimates and projections of expenses and revenue, while submitting the ARR and tariff petition. The Commission also makes certain assumptions while approving the expenses and revenue, on the basis of data available at that point in time. However, the actual expenses and revenue can be higher or lower than the amounts projected/approved by the Commission in its order, due to variation in controllable factors such as efficiency parameters like station heat rate, auxiliary consumption, transit loss, etc., as well as variation in uncontrollable parameters like fuel cost, taxes and duties etc. In a cost-plus regulatory regime, the utility is entitled to recover the actual costs and the reasonable return, subject to efficiency parameters and prudence check by the Commission, and should neither be subjected to the risk of under-recovery nor be in a position to earn additional return, due to fluctuations in uncontrollable factors, which have no bearing to the efficiency of the utility. The only way to ensure this is to institute a mechanism for truing up the actual expenses and revenue vis-à-vis the expenses and revenue considered in the Commission's order, subject to prudence check.

The Hon'ble Appellate Tribunal for Electricity (ATE) has ruled in Appeal No. 77, 78 and 79 of 2006 dated December 13, 2006, in the matter of SOUTHCO, WESCO and NESCO vs. OERC that "*truing up is an essential exercise required to be undertaken by the Regulator on a regular basis, where in actuals are compared with those approved and necessary results flow from it*."

CSPGCL in its petition has submitted the provisional truing up analysis for FY 2007-08 in its petition based on allocation of expenditure of erstwhile CSEB as per provisional accounts under various heads.

The Commission is of the view that during FY 2007-08, CSEB operated as an integrated utility and CSPGCL has been formed in January 2009 only. Further, the impact of truing up for FY 2007-08 needs to be passed on to consumers through CSPDCL's ARR. Therefore, the Commission has deliberated on the overall truing up of expenses and revenue for FY 2007-08 based on provisional accounts of CSEB in section 5 of this order. However, the Commission in this section has considered the truing up of operational parameters of generating stations and its impact on fuel costs.

The actual performance of generating stations vis-à-vis auxiliary consumption and secondary oil consumption norms as approved in the tariff order for FY 2007-08 is comparable except secondary fuel oil consumption of Korba-East Extn and hence no truing up of the expenses on account of these parameters is required. As regards secondary fuel oil consumption of Korba-East Extn, the Commission for truing up of expenses has considered the normative specific oil consumption of 4.5 ml/kWh for pre CoD period as against actual consumption of around 16.58 ml/kWh. In the context of station heat rate, the performance has been lower than the norms approved in the tariff order for FY 2007-08. As discussed in section 3.4.1 of this order, the Commission has further relaxed the Station Heat Rate norm and has considered the relaxed norms for truing up of fuel expenses for FY 2007-08. The total fuel costs as allowed by the Commission for FY 2007-08 works out to Rs 612.30 Crore as against the total actual fuel cost of Rs 670.09 Crore. The Commission has considered this approved fuel costs for FY 2007-08 after truing up while carrying out the overall truing up for FY 2007-08 in section 5 of this order.

3.6 Generation Tariff

Based on the approved ARR for CSPGCL as discussed above, the generation tariff projected by CSPGCL and approved by the Commission is given in the table below:

Table 3.70

Generation Tariff for FY 2009-10

Particulars	FY 2009-10	
	Petition	Approved
Annual Revenue Requirement (Rs. Crore)	2019.43	**1744.48**
Gross Generation (MU)	12918.75	13266.52
Auxiliary Consumption (%)	9.13%	8.99%
Net Generation (MU)	11739.47	12073.28
Average Generation Tariff based on net generation (Rs./kWh)	**1.72**	**1.44**

The average (pooled) generation tariff approved by the Commission for CSPGCL is Rs. 1.44 per kWh, as compared to Rs. 1.72 per kWh projected by CSPGCL. CSPGCL should charge average tariff of Rs 1.44 per kWh for net energy supplied to CSPDCL. The CSPDCL shall pay generation tariff at this rate to CSPGCL w.e.f 01.04.2009. In the power purchase cost of CSPDCL, power purchase at this rate has been assumed for the whole year.

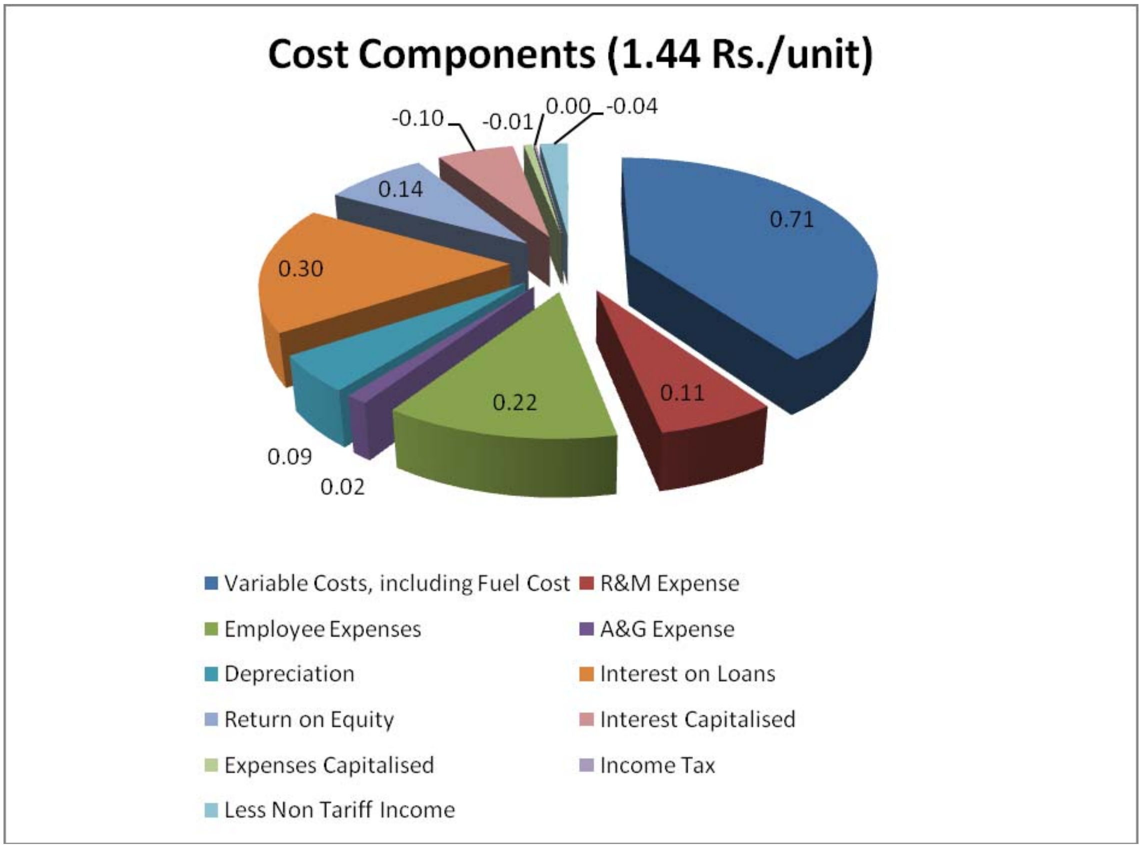
3.7 Cost Components of Average Generation Tariff

The cost components of average generation tariff of Rs. 1.44 per unit approved by the Commission for FY 2009-10 are as shown below:

Table 3.71

Cost Components of Generation Tariff for FY 2009-10

Particulars	Rs./unit
Variable Costs, including Fuel Cost	0.71
R&M Expense	0.11
Employee Expenses	0.22
A&G Expense	0.02
Depreciation	0.09
Interest on Loans	0.30
Return on Equity	0.14
Interest Capitalised	-0.10
Expenses Capitalised	-0.01
Income Tax	0.003
Less Non Tariff Income	-0.04
Total	**1.44**



Note: The income tax component works out to be 0.003 paise per unit.

4 CHHATTISGARH STATE POWER TRANSMISSION COMPANY (CSPTCL): ARR And TARIFF (Petition No.-11/2009(T))

4.1 About Company

As already mentioned, Chhattisgarh State Power Transmission Company Limited (CSPTCL) has been created recently by the State Govt by restructuring of the erstwhile CSEB. CSPTCL is a State Power Transmission Company and is responsible for transmission of Power within the State. Assets and Liabilities of erstwhile CSEB are not yet allocated to the successor companies.

4.2 Past Operational Performance Oof CSPTCL

The past operational performance of two years i.e., FY 2006-07 and FY 2007-08 is disucssed below. As the petitioner has filed the petition for FY 2008-09 and FY 2009-10, the Commission has discussed the actual performance during FY 2008-09 while analysing the various elements of ARR for FY 2009-10 in Section 4.4 of this order.

4.2.1 Transmission Network

In line with the growth in generation capacity and distribution network, the transmission network also has to be augmented to maintain the system stability, loss levels and voltage profile. The transmission network of the CSPTCL at present is as given in the Table below:

Table 4.1 Transmission Network

Voltage	Transmission Lines (Ckt. km)		No. of Substations		Total Substation Capacity (MVA)		No. of transformers	
(KV)	As in March 07	As in March 08	As in March 07	As in March 08	As in March 07	As in March 08	As in March 07	As in March 08
400	277	277	1	1	945	945	3	3
220	2153	2153	11	12	2890	3050	22	23
132	3926	3926	43	46	3100	3400.5	91	99
HVDC	360	360	1	1	243	243	6	6
Total	6716	6716	56	60	7178	7638.5	122	131

4.2.2 Transmission losses

The transmission losses as reported by CSPTCL for FY 2007-08 are 5.22%, as compared to the actual transmission losses of 4.03% reported in FY 2006-07. There has been an increase of 1.19% in the transmission losses during FY 2007-08, and an increase in the total units handled and sold. CSPTCL has submitted that the increase in transmission losses in FY 2007-08 as compared to FY 2006-07 is mainly because of the increase in open access energy transactions. However, in FY 2008-09, the transmission losses during first eleven months (i.e. April 2008 to February 2009) have slightly reduced to 5.01% as compared to transmission losses in FY 2007-08. The table below shows the transmission losses for CSPTCL during the past three years:

Table 4.2: Transmission losses for FY 2006-07, FY 2007-08 and FY 2008-09 (energy in MU)

Particulars	FY 2006-07 (Actual)	FY 2007-08 (Approved)	FY 2007-08 (Actual)
*Total Energy Input to Transmission	13375	14637	14328.61
Less: EHT sales/supply	2784		3129.64
Less: Input to Distribution System at 33 KV	10052	14047	10451.73
Transmission Loss	539	590	747.24
Transmission Loss (%)	4.03%	4.03%	5.22%

4.2.3 Capacitor Installation

The installation of capacitors in the system is essential to improve the power factor, to reduce reactive power flow on the network and improve voltage levels. CSPTCL installed capacitors of 20 MVAR during 2004-05, 125 MVAR during 2005-06 and 170 MVAR during FY 2006-07. Total installed capacity of capacitors as in FY 2006-07 was 614 MVAR. CSPTCL added 185 MVAR capacitors banks in FY 2007-08 to further improve the reactive power flow and voltage levels.

4.3 Tariff filing and technical validation

As discussed in Section 1 of this order, CSPTCL filed the ARR for FY 2008-09 and FY 2009-10, Tariff Petition for FY 2009-10 and Provisional true up for FY 2007-08 on January 22, 2009. Based on the discrepancies identified by the Commission, CSPTCL has submitted the corrected copy of the ARR and Tariff Petition on February 26, 2009 which was admitted by the Commission and was registered as Petition No. 11/2009 (T).

A technical validation session was held on March 06, 2009 and another discussion on April 8, 2009 which was attended by the staff of the Commission, officers of CSPTCL, and consultants of both CSPTCL and the Commission. During the discussions, CSPTCL was advised to furnish additional data, which were considered material for examination of the ARR and tariff, such as:

i) Actual data with respect to O&M expenses and capital expenditure for the nine months of FY 2008-09 i.e., from April, 2008 – December, 2008

ii) Actual data with respect to Energy Input and Transmission losses for eleven months of FY 2008-09 i.e., from April 2008 – February 2009

iii) Recalculated transmission losses for FY 2007-08 taking into consideration the REA data, bilateral sales and UI data for FY 2007-08.

iv) Schemes separately for evacuation of power from IPPs and others.

v) Provisional Accounts of CSEB for FY 2007-08.

vi) Details of cadre wise number of employees in Form F 5 a.

vii) Actuarial Valuation Report for terminal benefits of employees and Documentary proof of the amount deposited for Pension & Gratuity during FY 2007-08.

viii) Rationale for apportionment of A&G expenses in 30% Expenses on substation basis, 30% on Transformer capacity and 40% Expenses Per Ckt km.

ix) Reconciliation of DA percentage as 54% for FY 2008-09 and 66% for FY 2009-10, as CSPTCL has shown different values in the Petition.

x) Information with respect to pension and gratuity fund of erstwhile CSEB

xi) Year wise Amount Invested in Terminal Benefits fund till FY 2008-09

xii) Total Corpus available in Terminal Benefits fund as on March 31, 2009

xiii) Income earned from Terminal Benefits fund

xiv) Year wise terminal benefits liability met from Terminal Benefits Fund

xv) Terminal Benefits expenses considered separately for meeting the expenses outgo in FY 2007-08 and FY 2008-09

xvi) Basis of considering 9% increase in A&G expenses from FY 2006-07 till FY 2008-09 along with supporting documents.

xvii) Rationale for apportionment of A&G expenses in 30% Expenses on substation basis, 30% on Transformer capacity and 40% Expenses Per Ckt km.

xviii) Segregate SLDC charges from O&M Charges for FY 2007-08 to FY 2009-10

xix) Scheme wise break up of GFA addition and details of capitalization for O&M and Civil works.

xx) Soft copy of asset class wise depreciation computations for FY 2007-08, FY 2008-09 and FY 2009-10

xxi) Allocation of loans amongst G, T and D function and reconciliation of source wise closing balance of loan for FY 2007-08 apportioned to Transmission Business in the allocation statement with the details provided in interest computations for Transmission Business.

xxii) Re-computation of the reasonable return for FY 2007-08 on account of error in Capital Liabilities and Payment due on capital liabilities.

xxiii) Details of Miscellaneous receipts under Non Tariff Income for FY 2007-08, FY 2008-09 and FY 2009-10.

xxiv) Methodology of determining open access charges for short term open access customers.

xxv) Basis and justification for projected Quantum of energy by open access consumers and actual data with respect to Quantum of energy by open access consumers for 11 months of FY 2008-09.

xxvi) O&M expenses budget and Capital Budget for FY 2008-09 and FY 2009-10.

xxvii) Reasons for charging Income Tax for FY 2008-09 and FY 2009-10 when Post Tax ROE of 17.48%.

xxviii) Supporting documents in the form of Income Tax Challans for Actual Income Tax paid during FY 2007-08 and Advance Income Tax paid during FY 2008-09

4.4 Annual Revenue Requirement (ARR) of CSPTCL for FY 2009-10

4.4.1 Transmission Losses

As discussed in section 4.2.2 of this order, actual transmission losses during first eleven months for FY 2008-09 are 5.01%. CSPTCL in its Petition has proposed the reduction of 0.1% during FY 2009-10. The Commission directs the CSPTCL to reduce the losses by 0.11% for FY 2009-10 and approves the target transmission losses at 4.9% for FY 2009-10.

4.4.2 Operation and Maintenance (O&M) Expenses

The operation and maintenance (O&M) expenses are generally considered under the following heads:

- Employee expenses
- Administration and General Expenses
- Repairs and Maintenance Expenses

4.4.2.1 Employee Expenses

CSPTCL has submitted that actual employee expenses for CSEB as a whole for FY 2007-08 are apportioned among the three functions based on the number of employees in each of them.

Table 4.3

Employee Expenses of erstwhile CSEB for FY 2007-08 (Rs. Crore)

S. No	Particulars	FY 2007-08	
		Approved	Actual
1	Salaries	170.08	169.63
2	Overtime	-	13.66
3	Dearness Allowance (DA)	99.90	93.97
4	Other Allowances	24.07	30.90

S. No	Particulars	FY 2007-08	
		Approved	Actual
5	Bonus/ Exgratia	-	8.48
6	Productive incentive	-	2.29
7	Additional Pay	86.07	82.92
8	Interim Relief/wage revision	27.08	93.83
9	Medical Expenses Reimbursement	45.91	2.17
10	Leave Travel Assistance		1.83
12	Earned Leave Encashment		5.97
14	Payment under Workmen's Compensation Act		0.42
17	Supply of Free Electricity to Employees		0.93
18	Other Allowances and benefits		-
19	Staff Welfare Expenses	-	6.82
20	Terminal benefits	172.14	190.69
	TOTAL	**625.25**	**704.51**

Table 4.4

Allocation of Employee Expenses (Rs. Crore)

Function	FY 2007-08		Proportion of Employees FY 2007-08	
	Approved	Actual	Approved	Actual
Generation	166.07	217.39	26.56%	27.47%
Transmission	51.15	54.79	8.18%	10.58%
Distribution	408.04	432.33	65.26%	61.95%
Total	**625.26**	**704.51**	**100.00%**	**100.00%**

CSPTCL has projected employee expenses for the FY 2008-09 and FY 2009-10 based on the following assumptions.

- Increase in salary for FY 2008-09 considered as 18% (on account of VI pay revision) plus 6% normal increase and for FY 2009-10 as 6% (nominal percentage increase).
- Escalation of 8% in overtime allowance.
- Dearness Allowance (DA) rate considered as 54% & 66% for the FY 2008-09 & FY 2009-10 respectively as per Government orders.
- Increase of 23% & 6% considered in other cost for FY 2008-09 & FY 2009-10 respectively on account of 6th Pay Commission.
- Additional pay @ 50%of basic salary.
- Escalation of 6% and 8% on other employee expenses.
- Escalation of 6% on employer's contribution towards leave encashment.
- Contribution of Rs 394 Crore in FY 2008-09 and Rs 300 Crore in FY 2009-10 towards terminal benefit fund for all three companies. The amount considered in the petition, however is Rs 394 Crore)

The total employee expenses projected for FY 2008-09 and FY 2009-10 is Rs. 71.66 crore and Rs. 77.16 crore, respectively as shown in the table below:

Table 4.5

Employee Expenses projected by CSPTCL (Rs. Crore)

Particulars	FY 2008-09	FY 2009-10
	Petition	Petition
Basic Pay	16.36	17.34
Additional Pay	8.18	8.67
Dearness Allowances	13.19	17.17
Other Allowances	3.84	4.10
Interim Relief	0.00	0.00
Other Allowances and Benefits	2.20	2.37
Contribution to Gratuity and Pension Fund	32.27	32.27
Total	**76.04**	**81.87**
Less: Capitalisation	**-4.38**	**-4.71**
Total	**71.66**	**77.16**

CSPTCL has submitted that the major reasons for increase in the employee expenditure are due to wage revision, increase in DA rates and increase in contribution for Pension funds. CSPTCL has also submitted that the wage revision is necessary to keep the employees motivated and pay them at par with the industry.

Commission's views

The major reason for increase in employee expenses for FY 2007-08 for CSEB is due to wage revision. In the absence of division of employees in the transfer scheme, the Commission has considered the allocation employee expenses as submitted in the Petitions. The Commission has projected the employee expenses for FY 2009-10 on the basis of FY 2007-08 expenses with the following assumptions.

- Basic Pay : CSPTCL has not submitted any basis for 18% increase in basic pay towards pay revision. The pay revision was made effective from October 2007 and hence the actual employee expenses for FY 2007-08 factors in the pay revision for half of the year. Accordingly, the Commission has estimated the impact of pay revision by considering 9% increase on actual basic salary for FY 2007-08. Further, the Commission has considered the normal increase of 4% based on past trends, thus the total increase in basic pay for FY 2008-09 considered by the Commission is 13% provisional basis subject to truing up. For FY 2009-10, the Commission has considered a normal increase of 4%.
- Overtime increase is limited to 4%, i.e. increase approved for basic salaries.
- Average DA rate of 68% considered by the Commission for FY 2009-10 considering the prevalent DA rate.

- Increase in other costs at 13% for FY 2008-09 and 4% for FY 2009-10 i.e. increase approved for basic salaries.
- Additional pay @ 50%of basic salary.
- Increase in other employee expenses at 4%.
- For Pension Fund, CSPTCL has submitted that if the contribution made in an accounting period is less than that determined as per actuarial valuation, it is necessary to provide for the shortfall. The liability towards pension and gratuity fund increases from year to year due to increase in salary structure, increase in length of service of the employees, increase in number of employees and increase in the age of retirement. Maximum ceiling of the gratuity amount has been revised upward from Rs. 3.5 lakh to Rs. 10 lakh by the Chhattisgarh State Power Holding Company Limited (CSPHCL). Further, the retirement age has also been increased from 58 years to 60 years which is likely to increase the liability towards pension and graduity.

The Commission had directed the Board in the tariff order for FY 2007-08 to ensure that the amounts are contributed to the fund as booked in the accounts during the year, and invested appropriately, so that the funds can be self-generating and no provisioning is required after sometime. The Commission has directed CSEB in the tariff order for the FY 2007-08 to provide the details to the Commission regarding the size of the fund and the investment made out of the fund. All the details regarding the size of the fund and investments made have not been submitted by the Compsnies. The Commission has obtained a copy of Actuarial Valuation Report and the total fund requirement towards terminal benefits as on March 2008 is Rs 2735 crore for all three functions of generation, transmission and distribution. The total contribution made to fund till FY 2007-08 is Rs 1640 Crore. The three (CSPGCL, CSPTCL and CSPDCL(projected the total pension and gratuity expenses of Rs. 390.69 crore for FY 2009-10 which includes Rs. 300 crore towards lump-sum contribution to the fund and balance Rs. 90.69 crore towards payment of annual outgo during FY 2009-10. The Commission has considered the lump-sum contribution to the fund of Rs. 300 crore as proposed by the three companies. In accordance with the principles adopted by the Commission in the tariff order for FY 2007-08, the Commission has not separatley considered the annual outgo during FY 2009-10. The Commission would like to clarify that as the contribution towards pension fund is allowed in ARR, the companies should meet the annual outgo of terminal benefits out of contribution made to the fund and interest earned from the deposits made in the fund. There is thus no need to separately allow any annual outgo towards terminal benefits. While the Commission has agreed to contribution to the fund to the extent of Rs 300 Crore, during FY 2009-10, it has noted that serious issues have been raised about both the size of the fund as well as its management in the public hearings. The Commisison is issuing directive on this matter separately in this order.

The Commission has approved gross employee expenditure Rs. 69.28 crore for FY 2009-10 as against Rs.81.87 crore projected by CSPTCL, as given in the table below.

Table 4.6

Employee Expenses for CSPTCL (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Basic Pay	17.34	15.37
Additional Pay	8.67	7.69
Dearness Allowances	17.17	15.68
Other Allowances	4.10	3.54
Interim Relief	0.00	0.00
Other Allowances and Benefits	2.37	2.22
Contribution to Gratuity and Pension Fund	32.27	24.78
Total	**81.87**	**69.28**

4.4.2.2 Administration & General (A&G) Expenses

The A&G expenses comprise rent, rates and taxes, travel and conveyance expenses, consultancy and legal fees, insurance and other administration expenses. CSPTCL has submitted actual A&G expenses for CSEB as a whole for FY 2007-08 and apportioned among the three functions based on the function for which these have been incurred. The Common expenses have been allocated amongst the three functions based on their net fixed assets. The ratio for this division is 66.23%, 14.18% and 19.59% for Generation, Transmission and Distribution respectively.

Table 4.7

A&G Expenses of erstwhile CSEB for FY 2007-08 (Rs. Crore)

S. No	Particulars	FY 2007-08	
		Approved	Actual
1	Rent, Rates & Taxes	10.34	11.93
2	Insurance	0.00	14.37
3	Revenue Stamp Expenses Account	0.02	0.01
4	Telephone Charges, Postage, Telegram and Telex charges	2.61	2.62
5	Professional Charges		
	(i) Legal Charges	2.08	1.64

S. No	Particulars	FY 2007-08	
		Approved	Actual
	(ii) Audit Fees	0.94	0.22
	(iii) Consultancy Charges	6.96	3.18
	(iv) Technical Fees	1.72	0.98
	(v) Other Professional Charges	0.55	0.99
6	Conveyance & Travel Expenses	12.23	11.83
7	Other Expenses		
	(A) Fees & Subscription	14.45	1.02
	(B) Books & Periodicals		0.20
	© Printing & Stationary		2.87
	(D) Advertisement		4.92
	(E) Contribution		5.41
	(F) Electricity Charges (Offices)		0.99
	(G) Water Charges		0.30
	(I) Entertainment		0.30
	(J) Miscellaneous Expenses		8.57
8	Freight	0	0.01
9	Other Purchase related expenses	8.82	-6.17
	TOTAL	**60.72**	**66.06**

Table 4.8

Allocation of A&G Expenses (Rs. Crore)

Function	FY 2007-08	
	Approved	Actual
Generation	26.35	20.40
Transmission	13.58	19.18
Distribution	20.80	26.48
Total	**60.73**	**66.06**

CSPTCL has projected gross A&G expenses of Rs. 24.87 crore and Rs. 28.03 crore for FY 2008-09 and FY 2009-10 respectively, by adopting methodology as given in Central Electricity Regulatory Commission (CERC) Discussion Paper on CERC Terms and Conditions of Tariff Regulations, dated June 2003. The average A&G expenses for FY 2006-07 have been computed by taking the average of three years actual A&G expenses viz., FY 2005-06, FY 2006-07 and FY 2007-08 of erstwhile CSEB. This average A&G expense of FY 2006-07 is then increased by the inflation factor @ 9% over a two year period to arrive at the projected expenses for FY 2008-09. The expenses for FY 2008-09 have been trifurcated into three functions of erstwhile CSEB as per the percentages approved by the Commission in its Tariff Order for FY 2007-08. Norm arrived from base year figures for A&G expenses is Rs. 1.12 mn/ (30% expenses per s/s+30% on transformer capacity+ 40% expenses per ckt km). On the basis of norms and considering the previous 18 months WPI & CPI normal inflation rates CSPTCL has projected the A&G expenses for FY 2009-10. The head-wise A&G expenditure projected by CSPTCL for FY 2008-09 and FY 2009-10 is given in the table below:

Table 4.9

A&G Expenses projected by CSPTCL (Rs. Crore)

S.No	Particulars	FY 2008-09	FY 2009-10
		Petition	Petition
1	Administrative Expenses	14.58	16.43
2	Other Charges	5.26	6.66
3	Legal Charges	0.45	0.51
4	Auditor's Fee	0.04	0.04
5	Material Related Expenses	4.55	4.39
6	**Total**	**24.87**	**28.03**
7	**Less: Capitalisation**	**-1.57**	**-1.77**
	Total	**23.30**	**26.26**

Commission's views

The Commission has observed that major reason for increase in A&G expenses for FY 2007-08 was insurance expenses. In the absence of transfer scheme, the Commission has considered the allocation of A&G expenses for FY 2007-08 as submitted by the Companies in the Petition. The Commission has projected the employee expenses for FY 2009-10 considering the FY 2007-08 expenses as base, and based on the following assumptions.

The Commission is of the view that, CSPTCL has selectively adopted the approach based on CERC discussion paper of 2003. The new CERC Tariff Regulations for the period FY 2009-10 to FY 2013-14 has been specified which specifies the norms for overall O&M expenses and not component wise norms. The norms of entire O&M expenses for CSPTCL need to be framed during MYT Order after finalisation of the Transfer Scheme.

For FY 2008-09 and FY 2009-10, the Commission has considered an increase of 6.04% on account of inflation over the actual A&G expenses for FY 2007-08, based on the increase in Wholesale Price Index (WPI) and Consumer Price Index (CPI). The Commission has considered the point to point inflation over WPI numbers (as per Office of Economic Advisor of Govt. of India) and CPI numbers for Industrial Workers (as per Labour Bureau, Government of India) for a period of 3 years, i.e., FY 2006-07 to FY 2008-09 (upto December 2008), to smoothen the inflation curve. The Commission has considered a weight of 60% to WPI and 40% to CPI, based on the expected relationship with the cost drivers. Based on these assumptions, the A&G expenses approved by the Commission for FY 2009-10 are given in Table below:

Table 4.10

A&G Expenses for CSPTCL (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
A&G Expenses	28.03	21..59

4.4.2.3 Repair and Maintenance (R&M) expenses

CSPTCL has submitted actual R&M expenses for CSEB as a whole for FY 2007-08 and apportioned among the three functions based on the R&M expenses allocated to the particular function for which these have been incurred. The common expenses have been allocated amongst the three functions based on their fixed assets. The ratio for this division is 75.11%, 5.97% and 18.92% for Generation, Transmission and Distribution respectively.

Table 4.11

R&M Expenses of erstwhile CSEB for FY 2007-08 (Rs. Crore)

S. No	Particulars	FY 2007-08	
		Approved	Actual
1	Plant and Machinery	-	136.66
2	Building		13.96
3	Civil Works		7.84
4	Hydraulic Works		1.53
5	Lines, Cables Net Works etc.		16.93
6	Vehicles		3.19
7	Furniture and Fixtures		0.06
8	Office Equipments		1.13
9	Station Supplies		0.00
10	Other Credits to R&M Charges		-2.14
	Total	**142.4**	**179.15**

Table 4.12

Allocation of R&M Expenses (Rs. Crore)

Function	R&M Expenses		GFA	
	FY 2007-08		FY 2007-08	
	Approved	Actual	Approved	Actual
Generation	66.05	134.56	1321.00	1328.50
Transmission	24.70	10.69	494.00	530.39
Distribution	51.65	33.90	1033.00	1007.66
Total	**142.40**	**179.15**	**2848.00**	**2866.55**

CSPTCL has projected gross R&M expenditure of Rs. 37.79 crore and Rs. 43.50 for FY 2008-09 and FY 2009-10 respectively. The R&M expenses for FY 2008-09 have been calculated as 5% of the opening GFA. On the basis of norms and the previous 18 months WPI & CPI normal inflation rates have been considered by CSPTCL for the future years. Percentage of inflation considered over and above the norms is 7%. The head-wise R&M expenditure projected by CSPTCL for FY 2008-09 and FY 2009-10 is given in the table below:

Table 4.13

Table: R&M Expenses (Rs. Crore)

Particulars	FY 2008-09	FY 2009-10
	Petition	**Petition**
Plant and Machinery	13.95	16.05
Building	9.02	10.38
Civil Works	1.75	2.01
Hydraulic Works	0.00	0.00
Lines, Cables Net Works etc.	13.61	15.67
Vehicles	1.79	2.06
Furniture and Fixtures	0.05	0.06
Office Equipments	0.67	0.77
Station Supplies	0.00	0.00
Credits to R&M Charges	-3.04	-3.50
Issue from stores	_	_
Other handling of fuel related expenses	_	_
Total	**37.79**	**43.50**

Commission's views

The Commission in its previous Orders has approved R&M Expenses as 5% of opening GFA. CSPTCL in addition to 5% of GFA proposed 7% increase in R&M expenses for FY 2009-10. The Commission will specify O&M norms for CSPTCL in the MYT Order after finalization of Transfer Scheme. For FY 2009-10, the Commission has considered R&M Expenses @ 5% of opening GFA as approved earlier.

Table 4.14

Gross R&M Expense (Rs. Crore)

Particulars	FY 2009-10	
	Petition	**Approved**
R&M Expenses	43.50	40.69

4.4.3 Total O&M Expenses

CSPTCL has projected operation and maintenance (O&M) expenses (Employee, Administration & General, Repairs & Maintenance) as follows:

Table 4.15

Gross O&M Expense (Rs. Crore)

Particulars	FY 2009-10	
	Petition	**Approved**
Employee Expenses	81.87	68.12
A&G Expenses	28.03	21.59
R&M Expenses	43.50	40.69
Total O&M	**153.40**	**131.56**

Based on the CERC (Terms and Conditions of Tariff) Regulations, 2009, come into force on 1.4.2009, the total O&M expenditure for CSPTCL works out to be Rs. 130.14 crore as given in Table below:

Table 4.16

Norms as per CERC Regulation

S No	Particulars	As per CERC Norms, Fy 2009-10	Existing no of Bay/ Line length	Total Expenditure as per CERC, Fy 2009-10
A	**EHV Sub Stations**	**Rs. In lakh per Bay**	**Bays**	**Rs. In crore**
	400 KV	52.4	11	5.76
	220 KV	36.68	82	30.08
	132 KV	26.2	303	79.39
B	**Norms for AC and HVDC line**	**Rs. In lakh per km**	**Km**	**Rs. In crore**
	Single Ckt (bundled conductor with 4 or more sub conductor)	0.537		
	Single Ckt (Twin & Triple conductor) **400 KV**	0.358	277	0.99
	Single Ckt (Single Conductor) **132KV**	0.179	1045	1.87
	Double Ckt (bundled conductor with 4 or more sub conductor)	0.94		
	Double Ckt (Twin & Triple conductor) **220 KV**	0.627	1250	7.84
	Double Ckt (Single Conductor) **132 KV**	0.269	1565	4.21
Total				**130.14**

The O&M expenditure of Rs. 131.56 crore as approved by the Commission for FY 2009-10 are comparable to O&M expenses as per the norms prescribed by the CERC.

4.4.4 Capital Investment Plan for FY 2008-09 and FY 2009-10

CSPTCL in its Petition has submitted the capital investment plan for FY 2008-09 and FY 2009-10 as Rs. 271.29 crore and FY 824.77 crore respectively. CSPTCL submitted that it is planning major investments to augment transmission network to meet the current demands as well as to meet the future growth in demand. Moreover, emphasis is being laid to strengthen the transmission network for evacuation and transmission of power to every corner of the state with the eventual objective meeting the target of providing access to electricity for all households in the State by the year 2012 in line with the National Electricity Policy.

CSPTCL has further submitted that it has initiated different steps to use modern technologies in many areas of transmission to ensure improvement in efficiency, reduction is outage times leading to better monitoring of system parameters. CSPTCL has submitted that investment requirement in a transmission business is mainly on account of either laying of new transmission lines for evacuation of power from the upcoming projects in the state or strengthening of the existing transmission network to cope with the growing demand, reduction of transmission losses and connectivity to the new areas under development.

Further, CSPTCL has submitted that it is looking into the feasibility of construction of pooling substations from where power would be injected either into the PGCIL network or in the Intra-state transmission network for evacuation of power form the IPPs.

The detailed capital expenditure plan for the FY 2008-09 & FY 2009-10 considered by CSPTCL in its Petition is as under:-

Table 4.17

Capital Expenditure plan for CSPTCL (Rs. Crore)

S.No.	Name of transmission line and associated station	Length of line (Ckt. Kms.) / S/S. CAP. (MVA)	Estimated cost	FY 2008-09		2009-10	
				Km/MVA	Amt (Rs. Cr)	Km/MVA	Amt (Rs. Cr)
I.	**400 KV LINES**						
1	400 KV LINE for Power Evacuation from Korba West TPP	295	437.75	0	2.5	57	107.06
2	400 KV LINE for Power Evacuation from Marwa TPP	180	270.00	0	1.5	30	49.5
3	400 KV LINE for Power Evacuation from IFFCO JV TPP, Prem Nagar	323.28	456.70	0	0.12	81.84	9.02
	SUB TOTAL (II) (400kV LINES)	**798.28**	**1164.45**	**0**	**4.12**	**168.84**	**165.58**

S.No.	Name of transmission line and associated station	Length of line (Ckt. Kms.) / S/S. CAP. (MVA)	Estimated cost	FY 2008-09		2009-10	
				Km/M VA	Amt (Rs. Cr)	Km/M VA	Amt (Rs. Cr)
II.	**400 KV SUB STATIONS**						
1	400/220 KV S/S for Korba West TPP	630 MVA	199.49		5		61
2	400/220 KV S/S Bilaspur	1 no. / 315 MVA	125.00		1		14.00
	SUB TOTAL (II) (400KV S/S)	**0**	**324.49**	**0**	**6**	**0**	**75**
III.	**220 KV LINES :**						
1	220 KV LINE for Power Evacuation from Korba West TPP	181.5	80.22	35	22	111.5	47.19
2	220 KV LINE for Power Evacuation from Marwa TPP	100	59.4	0	1	20	11
3	220 KV LINES - System Strengthening	2190	650.43	0	8	120	66.5
	SUB TOTAL (III) (220KV LINES)	**2471.5**	**790.05**	**35**	**31**	**251.5**	**124.69**
IV.	**220 KV SUB STATIONS**						
1	220/132 KV S/S for Evacuation – Korba West	480MVA/40 MVA/47.5 MVA	82.06	160MVA/47.5 MVA	24.76	320MVA/40MVA	27.85
2	220/132 KV Sub Station - System Strengthening	960 MVA / 240 MVA	240	160 MVA/ 40 MVA	0.5	160 MVA / 40 MVA	40
SUB TOTAL (IV) (220KV SUB STATIONS)		**0**	**322.06**	**0**	**25.26**	**0**	**67.85**
V.	**132 KV LINES**						
1	132 KV LINE for Power Evacuation from Korba West TPP	24	7.65	8	5.75	16	1.8953
2	132 KV Transmission lines - System Strengthening	1422	459.76	53	39.16	368	149.75
	SUB TOTAL (IV)(132KV LINES)	**1446**	**467.40**	**61**	**44.91**	**384**	**151.645**
VI.	**132 KV SUB STATIONS**						
1	132/33 KV Sub Stations - Total	980.00	320.00	48.28	160.00	87.86	240.00
SUB TOTAL (VI)(132KV SUB-STATIONS)		**980**	**320**	**48.28**	**160**	**87.86**	**240**
VII.	**MISC. WORKS**						
1							
SUB TOTAL (VII) MISC. WORKS		**0**	**0**	**0**		**0**	
	GRAND TOTAL (I toVII) (PART - A)	**5695.78**	**3388.45**	**144.28**	**271.29**	**892.2**	**824.77**

Projected Capitalisation during FY 2008-09 and FY 2009-10

CSPTCL has submitted that during the FY 2008-09, Rs. 58.02 crore of investment towards EHV Works will be capitalized. Further, in the FY 2009-10, the Petitioner has proposed that capital expenditure works amounting to Rs. 375.64 crore would be capitalized details of which are tabulated as under:

Table 4.18

Projected Capitalization in FY 2008-09 and FY 2009-10 (Rs. Crore)

S.No	Particulars	FY 2008-09	FY 2009-10
		Petition	Petition
1	Spill over works		212.47
2	Power Evacuation scheme		72.42
3	Normal development scheme		90.75
	Total	**58.02**	**375.64**

Commission's views

The CSPTCL's capital expenditure plans, the funding for the same, preparedness for undertaking the same, orders placed, etc., were discussed with the CSPTCL's officers, to assess whether the high level of capital expenditure indicated by CSPTCL for FY 2008-09 and FY 2009-10 could be undertaken, and whether the required funds are tied up.

During technical validation scheme, the Commission directed CSPTCL to submit preparedness for executing the capital expenditure plan and the status of loans sanctioned by financial institutions for carrying out such plan. There were several rounds of discussion with CSPTCL staff on the capital expenditure plan submitted along with the Petition. CSPTCL has submitted that the loan has already been sanctioned by Power Finance Corporation for Korba Transmission plan. However, for Marwa Transmission scheme, the loan application is under progress.

After detail analysis and several round of discussion of the capital expenditure, CSPTCL made the revised submission on April 28, 2009, thereby revising the Capital Expenditure plan for the FY 2008-09 and FY 2009-10. The table below shows the revised capital expenditure plan submitted by CSPTCL for the FY 2008-09 and FY 2009-10:

Table 4.19

Revised Capital Expenditure Plan for FY 2008-09

S.No	Name of Projects	FY 2008-09 (Rs. Crore)
1	EHV Works Completed and capitalized	58.02
2	EHV Works under progress	89.27
3	Feeder Bays	13
4	System Improvement	20
5	Communication	0.722
A	**Total**	**181.012**
	Revenue Nature Work	
1	Renewable & Replacements	2.295
2	O & M Works	10.577
B	**Total**	**12.872**
	Total (A+B)	**193.88**

Table 4.20

Revised Capital Expenditure Plan for FY 2009-10

Particulars	Petition	Approved
Total for spill over, power evacuation and normal development work	666.05	499.54

CSPTCL has submitted Rs. 666.05 crore capital expenditure plan for FY 2009-10 (for spill over, power evacuation from the new projects and normal development work) in its revised submission. The Commission for computation of ARR has considered Rs. 499.54 crore (i.e. 75% of the revised capital expenditure plan submitted by CSPTCL). The Commission has considered the overall capital expenditure of Rs 499.54 Crore and the CSPTCL should prioritise its capital expenditure based on the requirements. The Commission would like to highlight that though the Commission, for the purpose of estimation of ARR and determination of tariff, has considered 75% of the capital expenditure towards other EHV works, Power Evacuation Scheme and normal developments as discussed above, however, the same should not be considered as approval of capital expenditure by the Commission. The Commission directs CSPTCL to submit the scheme-wise details of the capital expenditure for each scheme above Rs 5 Crore for the approval of the Commission.

As the capital expenditure is approved at 75% of the CSPTCL submission, the Commission has correspondingly reduced the asset capitalisation during the FY 2009-10 during the year which are summarised in the table as under:

Table 4.21

GFA for CSPTCL for FY 2008-09 & FY 2009-10

Particulars		FY 2008-09	FY 2009-10
GFA	Opening	755.86	813.88
	Addition	58.02	203.98
	Closing	813.88	1017.35

The funding considered by the Commission for various capital expenditure schemes is Debt:Equity ratio of 70:30 as proposed by CSPTCL. The summary of means of finance proposed by CSPTCL and as considered by the Commission is given in following Table:

Table 4.22

Means of Finance for FY 2009-10 (Rs. Crore)

Particulars	FY 2009-10		FY 2009-10	
	Petition		Approved	
	Debt	Equity	Debt	Equity
Spill Over	64.64	152.39	113.94	48.83
Power Evacuation Scheme	81.73	24.49	55.77	23.90
Normal Developments	81.47	261.33	179.97	77.13
Total	227.84	438.21	349.68	149.86

The Commission has considered the new loans based on the capital expenditure considered for estimation of ARR. The Commission has considered Debt: Equity Ratio of 70:30 for capital expenditure as proposed by CSPTCL. Based on the revised capital expenditure, the new loans considered by the Commission for FY 2009-10 is Rs. 349.68 crore.

4.4.5 Interest and Finance charges

CSPTCL has submitted that loans that could identified to a particular functional wing of G, T or D of erstwhile CSEB has been allocated to the respective functional company. However, the remaining loans have been trifurcated based on the GFA across the three functional companies.

Till the end of FY 2007-08, the interest obligations arising to the erstwhile CSEB were on account of the following loans:

a) Loan for Power evacuation from REC
b) Loans from state Government
c) SLR and PP bonds
d) Loans from various other sources

The interest and finance charges have been allocated to generation, transmission and distribution functions as shown in the table below:

Table 4.23

Allocation of interest and Finance charges (Rs. Crore)

S.No.	Loan Details	Actual		
		Generation	**Transmission**	**Distribution**
1	Government Loans	49.97	10.7	14.78
2	Public Bonds	12.81	2.74	3.79
3	Debentures	10.21	2.17	2.99
4	LIC Loans	0	0	0
5	REC Loans	94.65	0	0
6	Loans From Commercial Bank – SPA	0	0	0.35
7	Loans from CSS for Renovation	0	0	7.68
8	Loans from PFC	16.11	3.45	0
9	Other Sources	11.52	2.47	3.41
10	Financing Charges	0.75	0.75	1.03
	Total	**196.02**	**22.28**	**34.03**

CSPTCL has projected interest and finance charges for FY 2009-10 as Rs. 95.38 crore. The break-up of the interest and financing charges is as given in the table below:

Table 4.24

Projection of interest and finance charges for FY 2009-10 (Rs. Crore)

S.No.	Loan Details	FY 2009-10
		Petition
1	State Government loans	4.14
2	Public Bonds	6.36
3	Debentures	2.08
4	Loans from PFC	31.01
5	Loan from Western Coalfield Ltd.	1.77
6	Financing Charges	2.91
7	Interest on working capital	0
8	Interest on new loans in FY 2008-09	46.92
9	Interest on Consumer security deposit	0.19
10	**Gross Interest Charge**	**95.38**
11	Less: Interest & Finance Charges Capitalized	36.35
	Net Interest & Finance Charges	**59.03**

Commission's views

During the technical validation session, the Commission has directed CSPTCL to identify loans as per FY 2007-08 provisional accounts of CSEB for Generation, Transmission and Distribution function and apportionment of common loans along with basis of apportionment.

In reply, CSPTCL has submitted the details of loan for each company as follows:

Table 4.25
Allocation of Loan of erstwhile CSEB

Particulars	Total loan as on March 31, 2008	Allocation of Loans		
		CSPGCL	CSPTCL	CSPDCL
State Government Loan	908.16	557.42	126.04	224.67
Public Bonds (guaranteed by State Government)	213.2	130.86	29.59	52.74
RE Debentures	82.57	50.68	11.46	20.42
Loan received under CSS for modernisation and renovation & APDRP scheme	87.86			87.86
Loan from PFC, New Delhi	235.83		235.83	
Loan from REC	1354.42	1354.42		
Others	4.62	2.82	0.63	1.15
Total	**2886.66**	**2096.20**	**403.55**	**386.84**

In the absence of allocation of assets and liabilities among the companies of CSEB, the Commission has considered the reconciliation of the opening balance of loan as submitted by the CSPTCL for projecting the interest on existing loans.

The Commission has considered the new loans based on the capital expenditure considered by the Commission for estimation of ARR. The Commission has considered Debt: Equity Ratio of 70:30 for New Projects. Based on revised capital expenditure, the new loans considered by the Commission for FY 2008-09 and FY 2009-10 are Rs. 135.72 crore and Rs. 466.23 crore respectively.

The Commission has considered an interest rate of 11% as taken by CSPTCL on the new loans taken during the year, for determining the interest expenditure in FY 2008-09 and FY 2009-10. In case of any variation in the interest rate vis-à-vis the approved interest rate, the same will be considered at the time of truing up of the interest expenditure, since interest cost is a pass-through expense. The Commission has considered interest on new loans for half of the year as the capital expenditure and loan disbursements during the year will be spread across the year. The expenditure on interest and finance charges sought by CSPTCL and approved by the Commission is given in the table below:

Table 4.26

Interest and Finance Charges for FY 2009-10 (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Interest on existing loan	45.36	45.36
Interest on Security Deposit	0.00	0.00
Financing charges	2.91	2.91
Interest on New Loan	46.92	34.20
Total Interest and Financing Charges	**95.19**	**82.43**

4.4.6 Capitalization of Interest and O&M expenses

The O&M expenses incurred towards addition of capital assets has to be capitalised and added to the asset value, and charged off through depreciation over the life of the asset. Similarly, the interest expenditure during the construction period (IDC) has to be capitalised and added to the asset value.

CSPTCL has projected a total capitalisation of Rs. 13.78 crore and Rs. 43.64 crore for FY 2008-09 and FY 2009-10 respectively. O&M expenses capitalisation is Rs. 7.29 crore and interest capitalisation is Rs. 36.35 crore for FY 2009-10.

Commission's views

The Commission has accepted the methodology used by CSPTCL to determine the level of capitalisation of O&M expenses and interest expenses. However as the total O&M expenses and interest expenses as approved by the Commission are lower than CSPTCL's projections, the expenses capitalised approved by the Commission have reduced accordingly. The amount of capitalisation projected by CSPTCL and the capitalisation approved by the Commission for FY 2009-10 is given in the following table:

Table 4.27

Capitalisation of O&M and Interest Expenses (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
O&M Expenses Capitalised	7.29	6.25
Interest Capitalised	36.35	31.42

4.4.7 Depreciation

CSPTCL has submitted that it has considered depreciation on the assets capitalized during the year on pro-rata basis for the days of operation in accordance with the Commission's Tariff Regulations. Due to this, the amount of depreciation for new assets added during the year is also chargeable. The depreciation claimed by CSPTCL for FY 2008-09 and FY 2009-10 is shown in the table below:

Table 4.28

Depreciation projected by CSPTCL for FY 2008-09 and FY 2009-10 (Rs. Crore)

Particulars		FY 2008-09	FY 2009-10
GFA	Opening	755.86	817.02
	Addition	61.16	271.30
	Closing	817.02	1088.32
Depreciation	Opening Accumulated	178.31	206.15
	Due during the year	**27.84**	**35.44**
	Closing Accumulated	206.15	241.59

Commission's views

The Commission has examined the computations of depreciation submitted by CSPTCL. CSPTCL has submitted the revised computations for depreciation for the FY 2009-10 as Rs 41.70 Crore. The depreciation has been computed based on straight line method and considering the asset class wise depreciation rates specified in Regulations. The depreciation approved by the Commission for FY 2009-10 is given in the following Table:

Table 4.29

Depreciation for FY 2009-10 (Rs. Crore)

	FY 2009-10	
	Petition	**Approved**
Opening GFA	817.02	813.88
Additions	271.30	203.48
Closing GFA	1088.32	1017.35
Accumulated Depn at beginning of year	206.15	206.15
Depreciation During the year	**41.70**	**40.08**
Accumulated Depn at end of year	247.85	246.23
Depn Rate	4.38%	4.38%
Accumulated Depn as % of GFA	25%	25%

4.4.8 Reasonable Return

CSPTCL has submitted that for the equity contribution, erstwhile CSEB was eligible for returns of 14% on the equity contribution for projects where equity is either less than or 30% of project cost and in case of projects where equity contribution is more than 30%, the balance equity contribution was eligible for a return of 10% being the interest cost of debt. Based on the provisional account for FY 2007-08 and the principles adopted by the Commission in provision of reasonable return in the Tariff order for FY 2007-08, the reasonable return of CSPTCL for FY 2008-09 is computed in two parts.

Table 4.30

Reasonable Return for FY 2007-08 for CSEB (Rs. Crore)

Particular	Amount (in Rs. Crore)
RoE as on 31 March 2005	156.59
Total RoE on Equity Capex	164.16
(less) RoE on CWIP	-143.61
ROE on works Capitalized in 2007-08	73.53
Total Reasonable Return for FY 2007-08 of erstwhile CSEB	**250.68**

This reasonable return of CSEB would be trifurcated across Generation, Transmission and Distribution wing of erstwhile CSEB in proportion to the GFA of the three wings. Thus the Reasonable return of CSPTCL is Rs. 36.48 crore for FY 2007-08.

CSPTCL has submitted the reasonable return computations for FY 2008-09 and FY 2009-10 as follows:

Table 4.31

Reasonable Return for FY 2008-09 and FY 2009-10 for CSPTCL (Rs. Crore)

S.No	Particular	FY 2008-09 (Petition)			FY 2009-10 (Petition)	
		As on 31 March 2005	During the Period till March 2008	Total till March 2008	During the Period till March 2009	Total till March 2009
1	GFA	325.48	430.38	755.86	615.83	941.32
2	CWIP	271.55	225.61	497.17	214.70	486.25
	Sub Total	597.03	655.99	1253.03	830.53	1427.56
3	Grant	0.00	0.00	0.00	0.00	0.00
4	Capital Cost of Project	597.03	655.99	1253.03	830.53	1427.56
5	**Debt**	**378.17**	**321.32**	**699.49**	**460.86**	**839.02**
6	**Equity**	**218.87**	**334.67**	**553.54**	**369.67**	**588.54**
7	Equity (%)	36.66%	51.02%	44.18%	44.51%	41.23%
8	**RoE as on 31 March 2005**	**30.01**		**30.01**		**30.01**
9	RoE on Normative Equity		27.55	27.55	43.56	43.56
10	RoE on Remaining Equity		15.17	15.17	13.26	13.26
11	Total RoE on Equity Capex			72.73		86.82
12	**Less: RoE on CWIP**			**28.856**		**29.57**
13	**Reasonable Return**			**43.87**		**57.25**

Table 4.32

Reasonable Return for Capitalization during FY 2008-09 and FY 2009-10 for CSPTCL

(Rs. Crore)

Particulars	FY 2008-09	FY 2009-10
Equity Capitalisation during the year	12.23	54.32
Total Capitalisation	185.46	395.87
Share of Capitalisation	6.60%	13.72%
Return on normative Equity capitalization	0.86	4.75
Return on remaining equity	0.00	0.00
Total Return for capitalisation during the year	0.86	4.75

Thus the total Reasonable return due to CSPTCL is Rs. 44.73 crore for FY 2008-09. CSPTCL has submitted that the CERC has issued new regulations, namely CERC (Terms and conditions of Tariff) Regulations, 2009 for the period FY 2009-10 to FY 2013-14. In this regard the CERC Tariff Regulation, 2009 has provided for reasonable return at 17.481% as provided at Regulation 15 of the Tariff Regulation, 2009. CSPTCL has considered the Reasonable return of 17.481% for FY 2009-10 and thus the reasonable return for FY 2009-10 for CSPTCL is estimated at Rs. 62.00 crore.

Commission's views

During the technical validation sessions, the Commission had directed the CSPTCL to submit the revised computation of reasonable return for FY 2007-08, FY 2008-09 and FY 2009-10 on account of the error on the allocation of capital liabilities and payment due on capital liabilities. CSPTCL has submitted the revised workings of reasonable return.

The Commission has computed the reasonable return for erstwhile CSEB on opening equity for FY 2008-09 in accordance with Capital Base methodology adopted in previous tariff orders since the Transfer Scheme and Opening Balance sheets have not finalized. The Commission has allocated the reasonable return on opening equity for FY 2008-09 amongst the three companies in proportion of Gross Fixed Assets. The detailed computations of reasonable return for FY 2007-08 are given below.

Table 4.33

RoE for CSEB as a whole on opening equity for FY 2008-09 (Rs. Crore)

S.No	Particulars	Up to 31.03.05	From 01.04.05 to 31.03.08	Total, as on 31.03.08
	Capital Expenditure			
1	GFA	1910.45	3532.57	5443.02
2	CWIP	1195.50	328.43	1523.93
	Sub-total	3105.95	3861.00	6966.95
3	Less: Consumer Contribution /Capital Grants	-441.04	-791.46	-1232.50
4	Capital Cost of Project	2664.91	3069.54	5734.45
	Means of Finance			
5	Debts	1546.40	1440.30	2986.70
6	Debt %	0.58	0.47	0.52
	Equity			
7	Equity Share capital	23.12	0.00	23.12
8	Reserves/Surplus	1024.67	1138.38	2163.05
9	Internal Accruals	1307.65	-133.03	1174.62
10	Net Worth	2355.44	1005.35	3360.79
11	Investments	998.53	-401.10	597.43
12	Other Assets	1.46	7.36	8.82
13	Net Current Assets	236.95	-235.50	1.45
14	Net Equity invested in capex	1118.50	1634.59	2753.09
15	Equity%	42%	53%	48%
16	Return @14% on Rs. 1118.5 crore, on the total net equity invested in capex till 31.3.05	156.59		156.59
17	Return on equity employed in capex on or after 1.4.05 (Rs. 1634.59 crore) 1. @ 14% on Rs. 920.862 crore normative equity, i.e., 30% of capital cost of the project		128.92	128.92
18	8.5% on Rs. 713.73 crore (1634.59-920.68) equity employed in capex over and above the normative equity		60.67	60.67
19	Gross Total Return on Equity for FY 2007-08 on the basis of above total net equity invested in capital expenditure including CWIP	156.59	189.59	346.18
20	Less: out of the above gross total, Return on equity portion attributable to CWIP (346.8/6966) x 1523.93			92.00
21	Reasonable Return on equity allowable for FY 2007-08 for the whole CSEB on the net equity employed in capital expenditure excluding the portion attributable to CWIP			**254.18**

This reasonable return on opening equity for FY 2008-09 is trifurcated across Generation, Transmission and Distribution wing of erstwhile CSEB in proportion to the GFA of the three wings.

Table 4.34

Allocation of RoE for FY 2007-08 (Rs. Crore)

Particulars	Generation	Transmission	Distribution
Return on Opening Equity	156.00	35.30	62.89
GFA %	61.37%	13.89%	24.74%

Table 4.35

Computation of Return for FY 2009-10 on Equity for Projects Capitalised during FY 2008-09 and FY 2009-10 (Rs. Crore)

Year	Capitalization Amount	Equity	No. of Days	Return
FY 2008-09	58.02	17.41	365	1.22
FY 2009-10	203.48	61.04	183	6.71

As regards CSPTCL's plea for the revised rate of returns of 15.5% in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2009, the Commission is of the view that at this stage when the opening balance sheets of the companies are yet to be notified, it is not possible to assess the actual equity contribution by CSPTCL. The total equity share capital of erstwhile CSEB as on march 31, 2008 indicated in the provisional accounts is Rs only 23.12 Crore. The Commission in its previous orders have adopted the Capital Base approach for allowing the reasonable return to erstwhile CSEB. In the absence of opening equity share capital of three companies, the Commission in this order, would like to continue with the methodology (i.e. Capital Base approach for investments made till FY 2007-08) and principles (i.e. rate of 14%) adopted in previous orders for estimating the returns. The Commisison will take a view on higher rate of return on equity in accordance with CERC Regulations, referred to above during the next year's ARR and tariff determination process once the opening balance sheets of the companies are finalised and the information on equity share capital of three companies is avaiable. The Commission for FY 2009-10 has computed the return by considering the reasonable return allocated to CSPTCL for investments made till FY 2007-08 and by allowing the return on normative equity funding considered for capital expenditure during FY 2008-09 and FY 2009-10. **The reasonable return allowed by the Commission for FY 2009-10 is given in following Table:**

Table 4.36

Reasonable Return for FY 2009-10 for CSPTCL (Rs. Crore)

Particulars	FY 2009-10
	Approved
RoE for investments till 2007-08	35.30
Return on Equity Investments during FY 2008-09 and FY 2009-10	6.71
Total Return	**42.01**

4.4.9 Provision for Taxes

CSPTCL has claimed Rs. 1.88 crore as provision for income tax for FY 2009-10.

Commission's views

Regulation 27 of the Commission's Tariff Regulations stipulate that income tax, if actually liable to be paid, shall be limited to tax on return on equity allowed, excluding incentives.

CSPTCL has considered the Income tax exemption and has sought the Commission's approval only for the Fringe Benefit Tax (FBT) of Rs. 1.88 crore payable by CSPTCL. Hence, the Commission approves the tax liability for CSPTCL as Rs. 1.88 crore for FY 2009-10.

4.4.10 Non-tariff Income

CSPTCL has projected non-tariff income Rs. 19.10 crore for FY 2009-10. Non tariff income comprises mainly of income from all sources other than sale of electricity, viz., interest on fixed deposits, meter rent, delayed payment charges, miscellaneous receipts, income from trading, etc. The non tariff income of CSPTCL is as shown in the table below:

Table 4.37

Non-tariff income projected by CSPTCL for FY 2007-08 (Rs. Crore)

S.No	Particulars	FY 2007-08		FY 2008-09	FY 2009-10
		Approved	Provisional	Estimated	Petition
A	**Income from Investment, Fixed & Call Deposits**				
1	Interest Income from Investments	-	0.33	0.36	0.40
2	Interest on fixed deposits		3.45	3.80	4.18
3	Interest from Banks other than Fixed Deposits		0.00	0.00	0.00
4	Interest on any other items		4.11	1.13	1.24
	Sub-Total		7.90	5.29	5.82
B	**Other Non Tariff Income**				
1	Interest on loans and Advances to staff		0.08	0.09	0.10

S.No	Particulars	FY 2007-08		FY 2008-09	FY 2009-10
		Approved	Provisional	Estimated	Petition
2	Interest on Loans and Advances to other Licensee		0.00	0.00	0.00
3	Interest on Advances to Suppliers / Contractors		0.25	0.27	0.30
4	Income from Trading (other than Electricity)		0.28	0.31	0.34
5	Gain (Loss) on Sale of Fixed Assets		0.00	0.00	0.00
6	Income/Fee/Collection against staff welfare activities		0.01	0.01	0.01
7	Revenue from surcharges for late payment		0.00	0.00	0.00
8	Miscellaneous receipts		10.36	11.39	12.53
	Sub-Total		10.98	12.07	13.28
	TOTAL (A+B)	**14.66**	**18.87**	**17.37**	**19.10**

Commission's views

The Commission has accepted the CSPTCL's projection of non-tariff income for FY 2009-10.

4.4.11 ARR of CSPTCL

Based on various elements of expenses and return, as discussed above, the summary of ARR of CSPTCL for FY 2009-10 as projected by CSPTCL and as approved by the Commission is given in the table below:

Table 4.38

ARR for CSPTCL for FY 2009-10 (Rs. Crore)

S.No	Particulars	FY 2009-10	
		Petition	Approved
1	O&M Expenses	**153.39**	**131.56**
A	R&M Expenses	43.50	40.69
B	Employee Expenses	81.87	69.28
C	A&G Expenses	28.03	21.59
2	Depreciation*	41.70	40.08
3	Interest and Finance charges	95.38	82.43
4	Less: Interest & other expenses capitalised	43.64	37.67
5	Income tax	1.88	1.88
A	**Total Expenditure**	**248.71**	**218.28**
B	Add: Reasonable Return*	72.10	42.01
C	Less: non-Tariff Income	19.10	19.10
D	Less: Revenue from other charges (open access customers)	2.69	2.69
E	**Aggregate Revenue Requirement (A+B-C-D)**	**299.02**	**238.50**
F	**Revenue chargeable to Distribution company**	**299.02**	**238.50**

Revised figures as submitted by CSPTCL considered

The Commission has approved the ARR for CSPTCL as Rs. 238.50 crore, as compared to Rs. 299.02 crore projected by CSPTCL for FY 2009-10. The primary difference is on account of the reduction in O&M expenses, Interest and Finance Charges and Reasonable Return.

4.5 Aggregate Revenue Requirement of SLDC for FY 2009-10

4.5.1 Operation and Maintenance (O&M) Expenses

SLDC has projected operation and maintenance (O&M) expenses under the following heads:

- Employee expenses
- Repairs & Maintenance Expenses
- Administration & General Expenses

4.5.1.1 Employee Expenses

SLDC has submitted that presently there are 38 employees in SLDC and proposal of addition of 62 employees is under consideration. SLDC has proposed addition of 24 employees in the FY 2009-10. Employee Expenses projected by SLDC for FY 2009-10 is Rs. 4.38 crore.

Table 4.39

Employee Expenses projected by SLDC (Rs. crore)

Particulars	FY 2009-10
	Petition
Basic Pay	1.07
Additional Pay	0.53
Dearness Allowances	1.05
Other Allowances	0.28
Interim Relief	0
Other Allowances and Benefits	0.15
Contribution to Gratuity and Pension Fund	1.29
Total	**4.38**

4.5.1.2 Administration & General (A&G) Expenses

The A&G expenses comprise rent, rates and taxes, travel and conveyance expenses, consultancy and legal fees, insurance and other administration expenses. SLDC has projected A&G expenses of Rs. 0.62 crore for FY 2009-10. The head wise A&G expenses projected by SLDC are given in the table below:

Table 4.40

A&G Expenses projected by SLDC (Rs. crore)

S.No	Particulars	FY 2009-10
		Petition
1	Administrative Expenses	0.34
2	Other Charges	0.24
3	Legal Charges	0.01
4	Auditor's Fee	0.00
5	Material Related Expenses	0.03
6	**Total**	**0.62**

4.5.1.3 Repair and Maintenance (R&M) expenses

SLDC has projected gross R&M expenditure of Rs. 1.92 for FY 2009-10. The head-wise R&M expenditure projected by SLDC for FY 2009-10 is given in the table below:

Table 4.41

R&M Expenses projected by SLDC (Rs. Crore)

Particulars	FY 2009-10
	Petition
Plant and Machinery	1.61
Building	0.04
Civil Works	0
Hydraulic Works	0
Lines, Cables Net Works etc.	0.08
Vehicles	0
Furniture and Fixtures	0.08
Office Equipments	0.04
Station Supplies	0.07
Credits to R&M Charges	0.00
Issue from stores	_
Other handling of fuel related expenses	_
Total	**1.92**

4.5.1.4 Total (O&M) Expenses

SLDC has projected operation and maintenance (O&M) expenses (Employee, Administration & General, Repairs & Maintenance) as follows:

Table 4.42

Gross O&M Expense (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Employee Expenses	4.38	4.38
A&G Expenses	0.62	0.62
R&M Expenses	1.92	1.92
Total O&M	**6.92**	**6.92**

Commission's views

The Commission is of the view that the role of SLDC is going to increase substantially with the unbundling of erstwhile CSEB and addition of the open access consumers. For smooth system operations, it is essential that the SLDC maintains its separate accounts and recover its revenue requirement from the SLDC charges. The Commission has approved the O&M expenses of Rs. 6.92 crore as submitted by SLDC for FY 2009-10.

4.5.2 Capital Investment Plan for FY 2008-09 and FY 2009-10

SLDC has submitted the capital investment plan of Rs. 12.05 crore for FY 2009-10. SLDC has submitted that major capital investment is in shifting of SLDC, i.e., in setting up communication between Raipur and Bhilai SLDC.

The detailed capital expenditure plan for FY 2009-10 as submitted by SLDC is as under:

Table 4.43

Capital Expenditure plan for SLDC (Rs. Crore)

S.No	Area of Expenditure	FY 2009-10
1	**SLDC**	
A	Renovation and upgradation of SCADA/EMS system and cyber security system software	0.50
B	Software/Hardware upgradation for accounting system	0.25
C	software/Hardware for online power system study	0.05
D	Upgradation of internet media and networking hardware	0.02
E	New Multi channel voice recorder	0.10
F	Software upgradation (antivirus, office suite, proxi server etc.)	0.10
G	PC for executives and control room, (17nos) with all necessary peripherals and upgradation of existing systems	0.07
H	Shifting of SLDC	
I	SLDC Equipment	0.80
J	Communication between Raipur & Bhilai	5.16

S.No	Area of Expenditure	FY 2009-10
K	Purchase of New batteries for UPS	0.00
L	Supply and installation of additional transducers and cables	0.15
M	Developments of Website	0.21
N	Purchase of 2 KVA online UPS with routers	0.02
O	Phase-II of MEA	1.00
P	Electrification and wiring	0.02
	Total SLDC	**8.45**
2	**Repayment of ULDC project cost (For SLDC & Central Sector) Tentative in 15 years**	**3.60**
	Grand Total (1+2)	**12.05**

Commission's views

The Commission has considered the amount of Rs 12.05 Crore as submitted by SLDC towards capital expenditure during the FY 2009-10. The Commission directs SLDC to take up all these works on priority basis.

4.5.3 Interest and Finance charges

SLDC has not proposed any amount towards interest and finance charges for the FY 2009-10.

Commission's views

The Commission is of the view that to carry out the capital expenditure submitted by SLDC for the FY 2009-10, it will be essential to fund the same through a mix of Debt and Equity. Hence, SLDC will be required to raise loans form the financial institutions and banks for funding the capital expenditure. The Commission has considered normative Debt: Equity ratio of 70:30.

The Commission has considered an interest rate of 11% on the new loans taken during the year, for determining the interest expenditure in FY 2009-10. The expenditure on interest charges approved by the Commission is given in the table below:

Table 4.44

Interest and Finance charges for SLDC for FY 2009-10 (Rs. Crore)

Particulars	FY 2009-10 (Approved)
New Loan Amount	8.44
Interest on New Loan	0.46
Total Interest and Financing Charges	**0.46**

4.5.4 Depreciation

SLDC has not projected any expenditure towards depreciation for the FY 2009-10.

Commission's views

The Commission would like to emphasise that SLDC has projected capital expenditure during the FY 2009-10 which will be capitalised during the FY 2009-10 or the subsequent years. However, due to unavailability of information on capitalisation of expenditure during the FY 2009-10, the Commission has considered the entire capital expenditure plan getting capitalised in the FY 2009-10. On basis of above, the depreciation approved for the FY 2009-10 is Rs. 0.22 crore.

4.5.5 Reasonable Return

SLDC has not submitted any amount towards Reasonable return for the FY 2009-10.

Commission's views

The Commission has considered the Return @ 14% on equity investments considered by the Commission. The reasonable return allowed by the Commission for FY 2009-10 is given in following Table:

Table 4.45

Reasonable Return for SLDC for FY 2009-10 (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Reasonable Return	0.00	0.25

4.5.6 ARR of SLDC

Based on various elements of expenses and return, as discussed above, the summary of ARR of SLDC for FY 2009-10 as approved by the Commission is given in the table below:

Table 4.46

ARR for SLDC for FY 2009-10 (Rs. Crore)

Aggregate Revenue Requirement (Rs. Crore)		
S.No	Particulars	FY 2009-10
		Approved
A	Operating Cost Budget	
1	Operation & Maintenance Expenses	
i	Employee Expenses	4.38
ii	Administration & General Expenses	0.62
iii	Repair & Maintenance Expenses	1.92
2	RLDC Fees and WRPC Charges	
	Sub-total (operating Cost Budget)	**6.92**
B	Capital Related Expenses	

Aggregate Revenue Requirement (Rs. Crore)		
S.No	Particulars	FY 2009-10 Approved
1	Depreciation	0.22
2	Interest on Long-term Loan Capital	0.46
3	Return on Equity Capital	0.25
	Sub-total (Capital Charge Budget)	**0.93**
	Total	**7.85**

4.5.7 SLDC Charges

The commission will separately specify the SLDC charges after due consultation process.

4.6 Transmission Tariff

The transmission tariff proposed by the CSPTCL and approved by the Commission on the basis of the ARR of the transmission function and the energy wheeled to the CSPDCL is given in the table below:

Table 4.47

Transmission Tariff for FY 2009-10

Sl.	Particulars	FY 2007-08	FY 2009-10	
		Approved by Commission	CSPTCL Petition	Approved by Commission
1	**Aggregate Revenue Requirement**	186	282.66	238.50
2	Energy available for transmission (MU)	14637	17821	16609
3	Energy delivered to distribution (MU)	14047	16929	15796
4	Transmission Loss (%)	4.03%	5.01%	4.9%
5	**Transmission Tariff (paise/kWh)**	**13**	**17**	**15**

The approved annual transmission charges of Rs 238.50 crore +SLDC charges of Rs 7.85 crore shall be recovered by CSPTCL from CSPDCL on monthly basis i.e. Rs 20.53 crore/month. Since this charges has been included in the ARR of CSPDCL for the whole year, transmission charges at this above rates shall be payable by CSPDCLw.e.f 01.04.2009.

4.7 Transmission Charges for Open Access Customers

The approved transmission charges payable for use of the transmission network by long-term and short-term open access customers, computed in accordance with the Regulation 9 of the CSERC (Intra-State Open Access in Chhattisgarh – First Amendment) Regulations, 2007, is given in the table below:

Table 4.48

Transmission Charges for Open Access Customers for FY 2009-10

Sl.	Particulars	Unit	Formula	Approved by Commission for FY 2007-08	Proposed by CSPTCL for FY 2009-10	Approved by the Commission for FY 2009-10
1	ARR of Transmission function	Rs. Crore		186	285.34	238.50
2	Maximum Capacity in previous year (FY 2008-09)	MW		2454	2900	2756
3	Transmission Charges					
a	Long-term open access Customers	Rs/MW/ Month	LT_TC = [Transmission ARR/Max_CAP]/12	63030	81995	72115
b	Short-term open access Customers	Rs/MW/ Day	ST_TC = [0.25x(Transmission ARR/Max_CAP)]/365	518	674	593

The transmission charges has thus, been approved by the Commission as Rs. 72115 per MW/month for long-term open access customers and Rs. 593 per MW per day for short-term open access customers, to be paid in cash. The technical losses will be reckoned as 5% (which is the existing level of transmission losses) to be deducted from the energy input, for computing transmission charges in kind.

5 CHHATTISGARH STATE POWER DISTRIBUTION COMPANY (CSPDCL): ARR AND TARIFF (Petition No.-12/2009(T))

5.1 About Company

As already mentioned, CSPDCL has been created recently by GoCG through reorganisation of the erstwhile CSEB. CSPDCL is the State Power Distribution Company and is responsible for distribution and supply of power within the State.

5.2 Past Operational and Financial Performance of CSPDCL

The past operational performance of two years i.e., FY 2006-07 and FY 2007-08 is disucssed below. As the petitioner has filed the petition for FY 2008-09 and FY 2009-10, the Commission has discussed the actual performance during FY 2008-09 while analysing the various elements of ARR for FY 2009-10 in Section 3.4 of this order.

5.2.1 Distribution Network

The distribution network of CSPDCL (erstwhile CSEB) expanded aggressively during the last four years. The year-wise status of the distribution network is as follows:

Table 5.1
Distribution Network

Voltage	Distribution Lines (Ckt.km)			Sub-Stations (Nos.)		
	As at end March 06	As at end March 07	As at end March 08	As at end March 06	As at end March 07	As at end March 08
33 KV	10521	11415	12526	469	510	596
11 KV	48401	51564	54183	43144	48110	52384
LT Line	72036	80367	89577	-	-	-

5.2.2 Consumer Profile

Among the different kinds of statements generated by the CSPDCL, which are useful for analysis of its operational and financial performance, R-15 is a very important statement, which gives a bird's eye view of the overall performance of the company. The LT R-15 statement is being prepared at the distribution centre level and HT R-15 at RAO level. The consolidated statement for LT & HT consumers is prepared at headquarter level. R-15 gives monthly as well as annual status of the total number of consumers, connected load, energy sales, revenue billed and the arrears against the different categories of consumers.

CSPDCL has submitted that the slab-wise LT sales data has been extracted from the R-15 for FY 2007-08. CSPDCL has further submitted that the figures for energy sales in R-15 have been modified from FY 2008-09 to align these with the tariff categories specified by the Commission in the tariff order for FY 2007-08, since the tariff order for FY 2007-08 was made applicable from November 1, 2007. An overview of the number of consumers of various categories, their connected load and sales, as submitted by the company, is given in the table below:

Table 5.2 Consumer Profile for FY 2006-07 and FY 2007-08

Sl No.	Consumer Category	Number of Consumers		Connected load (kW)		Sales (MU)		
		FY 2006-07	FY 2007-08	FY 2006-07	FY 2007-08	FY 2006-07	FY 2007-08 (Approved)	FY 2007-08 (Actual)
	LT Category							
1	Domestic: BPL	845286	914996	44300	54401	304	331	329
2	Other Domestic	1264830	1336580	747168	783062	1236	1356	1461
3	Non-Domestic	175066	183554	218729	255734	288	322	337
4	Agriculture							
	a) Metered consumers	2058	4589	13709	18356	21	184	22
	b) Flat Rate consumers	128610	159598	364805	638392	566	619	751
	c) Allied services	-	221	-	610	1	1.6	5
5	Industry	22252	23046	357642	382492	374	412	399
6	Public Utilities	8492	9358	33305	44664	109	119	121
7	Temporary Supply	17249	18571	33673	40677	109	115	76
	Subtotal (LT Category)	**2463843**	**2650513**	**1813331**	**2218388**	**3007**	**3460**	**3500**
	HT Category	**1025**	**1153**	**1707280**	**1906441**	**5614**	**6414**	**6350**
	Total	**2464868**	**2651666**	**3520611**	**4124829**	**8622**	**9874**	**9850**

Note: Consumers profile for HT Category has been presented as a whole, since the HT tariff categories were restructured in the tariff order for FY 2007-08.

The total sales to various categories in FY 2007-08 have increased by 14.24% over sales in FY 2006-07.

5.2.3 Distribution Losses

The level of distribution losses in the system reflects efficiency of the Distribution Company. The reported distribution losses in FY 2007-08 are 39.32% with respect to energy at distribution input level and 29.37% with respect to energy at system input level. The actual overall transmission and distribution losses of erstwhile CSEB for FY 2007-08 has been 34.46% against the Commission's approved target of 32.54%. The CSEB could not meet the target set by the Commission for past three years as shown in the Table 5.3.

Table 5.3 Transmission & Distribution Losses

Year	Proposed	Approved	Actual
FY 2005-06	35.81%	35.81%	36.19%
FY 2006-07	34.51%	33.81%	35.54%
FY 2007-08	34.54%	32.54%	34.46%

Table 5.4 Distribution losses

Year	FY 2005-06	FY 2006-07	FY 2007-08
Distribution loss (w.r.t. system input level)	32.36%	31.52%	29.37%
Distribution loss (w.r.t. distribution input level)	43.96%	41.92%	39.32%

CSPDCL has computed the losses for FY 2007-08 considering the consumption norms for BPL category and unmetered agricultural category as approved by the Commission. However, based on the preliminary results T&D loss study of a study being carried out, revised norms for BPL category and unmetered agricultural category have been proposed which are discussed in detail while analysing the sales projections for FY 2009-10 in section 5.4 of this order.

CSPDCL has submitted that the losses have been increasing in the last few years on account of the increased rural electrification, which leads to higher technical losses, as well as increase in commercial losses. Growth in agricultural and BPL connections have been substantial in the last few years which has also led to increase in losses.

The Commission has already stated in its previous tariff order that given the favourable HT:LT consumer and consumption mix, the distribution losses reported by CSPDCL are very high and the efforts made to reduce losses have so far been minimal.

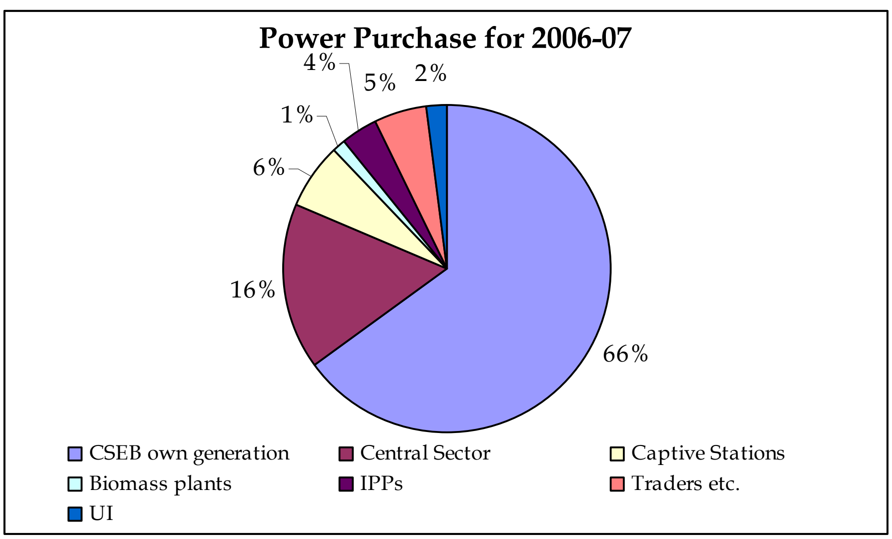
5.2.4 Power Purchase

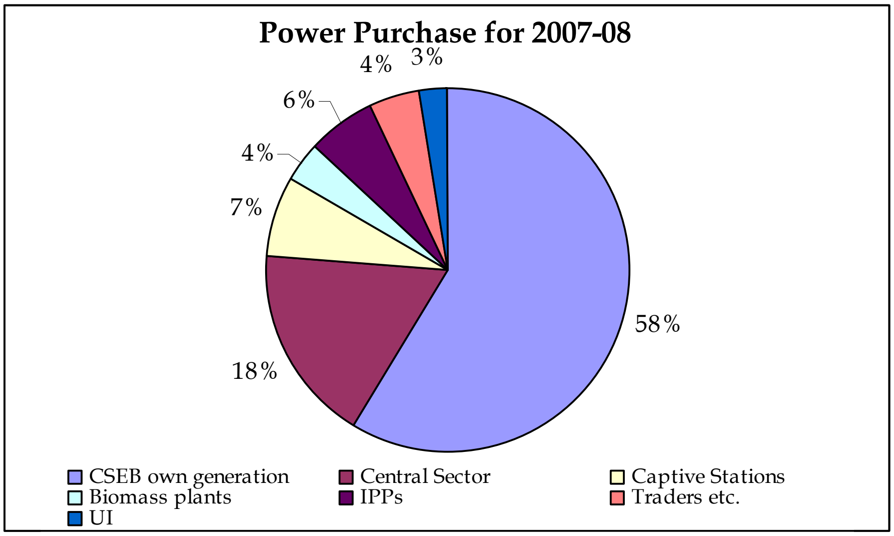
In FY 2006-07 and FY 2007-08, CSPDCL (erstwhile CSEB) received power from CSPGCL generating stations, Central Generating Stations and other sources like captive power plants, bio mass units and from independent power producers, to meet the energy demand in the State as shown in the table below:

Table 5.5 Power Purchase (MU)

Power purchase from CSPGCL		
Particulars	**FY 2006-07**	**FY 2007-08**
Thermal	8364.96	9142.34
Hydro	390.23	273.02
Total	**8755.19**	**9415.36**
Power purchase from other sources		
Particulars	**FY 2006-07**	**FY 2007-08**
Central Sector	2175.97	2837.41
Captive Stations	856.78	1142.56
Biomass plants	184.06	613.36
IPPs	516.35	942.81
Traders etc.	697.43	718.71
UI	259.42	-418.83
Total	**4690.01**	**5836.02**
Grand Total	**13445.20**	**15249.86**

The chart below shows the percentage-wise share of energy generated and purchased during FY 2006-07 and FY 2007-08:





It can be seen that over a period of one year there has been changes in the mix of the power purchase. Marked change can be seen in the power purchased from the non-conventional energy sources particularly bio-mass based generators which has contributed 4% of the total energy requirement in FY 2007-08 as against 1% in FY 2006-07. Harnessing of power from captive power plants and IPPs has increased from 10% in FY 2006-07 to 11% in FY 2007-08.

5.2.5 Energy Balance

The total energy requirement to meet the actual sales including loss in transmission and distribution systems was 15016 MU in FY 2007-08 showing an increase of 13.42% over the previous year. The Commission, while determining energy balance for FY 2007-08, has considered sales within the State. The energy balance statement is given below:

Table 5.6 Energy Balance

Energy Requirement (MU)	FY 2007-08
Energy Sales	9850.00
Intra State T&D Loss in %	34.40%
Intra State T&D Loss in MU	5166.00
Energy Requirement (MU)	**15016.00**
Met By	
CSPGCL Thermal Generation	9142.34
CSPGCL Hydro Generation	273.02
Net Power Purchase	5600.64
Total Availability	**15016.00**

5.2.6 Energy Sales and Revenue

Category-wise sales and revenue during FY 2006-07 and FY 2007-08 are given in the table below:

Table 5.7 Sales and Revenue

Particulars	FY 2006-07		FY 2007-08	
	Sales (MU)	Revenue (Rs Cr.)	Sales (MU)	Revenue (Rs Cr.)
Sale of Power within State	8622	2854	9850	3078
Sale of power outside the State			397	219
Other Income		235		302
Total	**8622**	**3089**	**10247**	**3599**

The other income in FY 2007-08 has increased substantially as compared to that reported in FY 2006-07. The other income in FY 2007-08 includes Rs. 219 crore as the income from sale of power outside the state, which was not there in FY 2006-07. CSPDCL in its petition has considered the income of Rs 369.52 crore earned from UI under-drawal twice. CSPDCL has reduced this income from the total power purchase costs as well as considered this income as part of sale of power outside the State. Thus, there was double accounting of UI income in the figures submitted by CSPDCL in its petition. CSPDCL has admitted that there was an error and income from UI has been considered twice. Due to this, the revenue reported by the company during 2007-08 is Rs 3876 crore instead of Rs 3598 crore which is the actual. It is surprising that such an error should have escaped the notice of all concerned even when the information has been submitted under affidavit and placed in the public domain.

5.2.7 Financial Performance of erstwhile CSEB

The financial performance of erstwhile CSEB during FY 2006-07 and FY 2007-08, as per the petition, is shown below:

Table 5.8 Profit and Loss Account of erstwhile CSEB (All figures are in Crore)

Particulars	FY 2006-07	FY 2007-08
Revenue (Rs. Crore)		
Revenue from sale of power (within State)	2854	3078
Other Income/Non-tariff Income	218	302
Income from sale of power outside State	0	219
Total Revenue	**3072**	**3599**

Particulars	FY 2006-07	FY 2007-08
Expenses		
Fuel Expenses	501	670
Power Purchase	1045	1207
O&M Expenses	838	950
R&M Expense	192	179
Employee Expenses	587	705
A&G Expense	59	66
Net Prior Period Credit (-) / Charges (+)	1	0
Less: other expenses capitalised	29	39
Other Debits (incl. Prov for Bad debts)	81	12
Total Expenses	**2437**	**2801**
Profit Before Interest, Depreciation & Tax (PBDIT)	**635**	**799**
Depreciation and Related Debits	**42**	**90**
Profit Before Interest & Tax (PBIT)	**593**	**709**
Interest & Finance Charges	196	277
Less: Interest & other expenses capitalised	37	89
Net Chargeable to Revenue	158	188
Profit/Loss before Tax	**435**	**520**
Income Tax & Other (Misc.)	**163**	**192**

The Commission has analysed the performance of CSEB in FY 2007-08 vis-à-vis the performance and expenditure allowed in the Commission's tariff order for FY 2007-08 on the basis of submissions in this petition and provisional accounts for FY 2007-08 in section-5.5 of this order.

5.3 Tariff Filing and Technical Validation

As discussed in section 1 of this order, CSPDCL has filed the ARR for FY 2008-09 and FY 2009-10, tariff petition for FY 2009-10 and provisional true up for FY 2007-08 on January 22, 2009. There were a number of discrepancies in this application. These were removed and the corrected ARR and tariff petition have been filed on February 26, 2009. These have been admitted by the Commission and registered as Petition No. 12/2009 (T).

Technical validation sessions were held on March 07, 2009 and on April 09, 2009 which were attended by the staff of the Commission, officers of CSPDCL, and consultants of both, CSPDCL and the Commission. During the discussions, CSPDCL was advised to furnish additional data, which were considered material for examination of the ARR and tariff, as follows:

i) Actual data with respect to O&M expenses and capital expenditure along with Means of Finance for the nine months of FY 2008-09 i.e., from April, 2008 – December, 2008.

ii) Actual data with respect to sales, losses, energy input, power purchase and revenue for the first nine months of FY 2008-09 i.e from April 08 – Dec 08.

iii) Actual data with respect to break up of power purchase costs into fixed costs, variable costs, FPA, Incentive and others for the month of January and February 2009.

iv) Actual distribution losses and Category-wise actual sales to EHV and HV categories for FY 2008-09.

v) Number of consumers, connected load, consumption and revenue data for the period April 2008 to December 2008 for sub-categories as per tariff order under Agricultural Category and LT Industrial Category.

vi) Actual sales of HT category consumers from FY 2002-03 to FY 2007-08 as per categories specified in tariff order for FY 2007-08.

vii) Copy of State Government order with respect to supply of power to BPL consumers.

viii) Number of BPL and Agricultural connections released during FY 2008-09.

ix) Basis for projections of connected load and number of consumers for FY 2008-09 and FY 2009-10.

x) Rationale for considering a load factor of 50% and power factor of 0.9 for new HT consumers and load factor of 25.34% for agricultural metered consumers.

xi) Revised soft copy of Form R3 (a) for FY 2007-08.

xii) Basis and assumptions for sale of power to trading company.

xiii) Actual monthwise average and peak demand for FY 2007-08 and first nine months of FY 2008-09 and the monthly representative load curves.

xiv) Projected average and peak demand for FY 2009-10 along with assumptions.

xv) Basis of distribution loss reduction trajectory for FY 2008-09 to FY 2011-12.

xvi) District wise energy input, output and distribution loss for FY 2006-07, actual data for FY 2008-09 (till Feb, 09) and projected data for FY 2008-09 and FY 2009-10 in the Format P(a).

xvii) Current allocation both firm allocation and CSPDCL's share in unallocated capacity of Central Generating Power Stations.

xviii) Latest status of the Sipat- II Project and energy received in FY 2008-09.

xix) Basis and justification for considering losses for power station in Western region as 4.69% and for Power stations in Eastern region as 7.40% for FY 2007-08. Actual data regarding losses for power stations and weighted average losses in Western and Eastern regions for first nine months of FY 2008-09.

xx) Basis for Plant load factor assumed for central generating stations for FY 2009-10.

xxi) Copy of short term PPA with Jindal Power Limited for 150 MW.

xxii) Arrangements proposed/made for purchasing power during peak hours for FY 2009-10.

xxiii) Details of cadre wise number of employees in Form F 5 a.

xxiv) Actuarial Valuation Report for terminal benefits of employees and Documentary proof of the amount deposited for Pension & Gratuity during FY 2007-08.

xxv) Terminal Benefits contribution provided for FY 2008-09 and FY 2009-10 for all the three entities is Rs. 200 Crore, however as mentioned in the petition as Rs. 100 core.

xxvi) Information with respect to pension and gratuity fund of erstwhile CSEB:

   i. Year wise Amount Invested in Terminal Benefits fund till FY 2008-09
   ii. Total Corpus available in Terminal Benefits fund as on March 31, 2009
   iii. Income earned from Terminal Benefits fund
   iv. Year wise terminal benefits liability met from Terminal Benefits Fund
   v. Terminal Benefits expenses considered separately for meeting the expenses outgo in FY 2007-08 and FY 2008-09

xxvii) Basis of considering 9% increase in A&G expenses from FY 2006-07 till FY 2008-09 considered along with supporting documents.

xxviii) Basis of considering 7% increase for projecting A&G expenses for FY 2009-10 over previous year.

xxix) Head wise actual expenses incurred for Distribution function and common expenses allocated to Distribution function alongwith supporting computations.

xxx) Scheme wise break up of GFA addition and details of capitalization for FY 2007-08, FY 2008-09 and FY 2009-10.

xxxi) Soft copy of asset class wise depreciation computations for FY 2007-08, FY 2008-09 and FY 2009-10

xxxii) Allocation of loans amongst G, T and D function.

   a. Re-computation of the reasonable return for FY 2007-08 on account of error in Capital Liabilities and Payment due on capital liabilities.
   b. Equity contribution and consumer contribution separately in the capital expenditure for FY 2008-09 and FY 2009-10.

c. Details of tranche-wise loan received along with date of receipt and interest computations for all the loans received by CSEB in FY 2007-08 and FY 2008-09.

xxxiii) Break up of other debits for FY 2007-08 and basis of Other Debits for FY 2008-09 and FY 2009-10.

xxxiv) Reconciliation of actual Income Tax paid for FY 2007-08 alongwith Supporting documents in the form of Income Tax Challans for Actual Income Tax paid during FY 2007-08 and Advance Income Tax paid during FY 2008-09.

xxxv) Break up for Miscellaneous Receipts and Miscellaneous Charges for FY 2007-08 to FY 2009-10.

xxxvi) Details of Income from Wheeling Charges.

xxxvii) Consumer category wise receivables and provide the complete details in Form 9.

xxxviii) Provision of EA, 2003 or Regulation, under which Revenue Surplus of FY 2007-08 and FY 2008-09 has been proposed to be converted into the equity of these restructured companies in the Transfer Scheme.

xxxix) Copy of State Government order for shifting Poultry and Fisheries from the existing Agriculture Allied services to LT Agriculture metered category.

xl) Justification for increase in tariff proposed by various categories in the tariff petition.

xli) Methodology for levying Delayed payment surcharge (DPS) as to whether the DPS should be levied only on original bill amount or original bill amount plus delayed payment surcharge levied in previous months.

xlii) Justifications for proposed modification in TOD tariff structure i.e. change from 3 TOD slots to 2 TOD slots.

xliii) Note on creating another slab of 0-100 units per month for domestic consumers including the consumption data of domestic consumers consuming upto 100 units for the period April to December 2008.

xliv) Reconciliation of Total Revenue and Non Tariff Income included in ARR and tariff petition for FY 2007-08 with Provisional Accounts for FY 2007-08.

5.4 Annual Revenue Requirement (ARR) of CSPDCL for FY 2009-10

5.4.1 Consumers Profile Category-wise

The total number of consumers of the CSPDCL as on March 31, 2008 has been stated to be 26.51 lakh which comprises 22.50 lakh (99.95%) LT consumers and 0.012 lakh (0.05%) HT consumers. CSPDCL has projected 10.14% increase in the number of consumers over FY 2007-08 which will result in 29.20 lakh consumers in FY 2008-09 and 15.74% increase in FY 2009-10 over FY 2008-09 which will result in 33.80 lakh consumers at the end of FY 2009-10. The consumer mix and the category-wise increase in the number of consumers projected by CSPDCL for FY 2008-09 and FY 2009-10 are given in the table below:

Table 5.9

Category-wise Consumers

			Number of consumers at the end of the year			Projected growth in number of consumers		% of total LT/HT Consumers
	Category	**Volt-age**	**FY 2007-08 (Actuals)**	**FY 2008-09 (Petition)**	**FY 2009-10 (Petition)**	**FY 2008-09 (Petition)**	**FY 2009-10 (Petition)**	**FY 2009-10 (Petition)**
LT Consumers								
LV-1	Domestic (BPL)		914996	1154996	1394996	240000	240000	52.21%
	Other Domestic		1336580	1350669	1521229	14089	170560	37.11%
LV-2	Non-domestic		183554	185175	210864	1621	25689	5.59%
LV-3.1	Agriculture (metered)		4589.00	22589	42589	18000	20000	4.35%
LV-3.2	Agriculture (flat rate)		159598	159598	159598	0	0	0.00%
LV-4	Agriculture allied services		0	508	533	508	25	0.01%
LV-5	LT Industrial		23046	23285	25667	239	2382	0.52%
LV-6	Public Utilities (PWW & SL)		9358	8917	9925	-441	1008	0.22%
LV	Temporary		18571	13336	13336	-5235	0	0.00%
LT Total			**2650292**	**2919073**	**3378737**	**268781**	**459664**	100.00%
HT Consumers								
EHV-1	Railway Traction	220/ 132 kV	21	21	21	0	0	0.00%
EHV-2	Heavy Industries	220/ 132 kV	3	3	3	0	0	0.00%
EHV-3	Steel Industries	220/ 132 kV	13	13	13	0	0	0.00%
EHV-4	Coal Mines, Cement Ind. & other EHV Consumers	220/ 132 kV	7	7	7	0	0	0.00%
HV-1	Steel Industries	33kV	285	285	285	0	0	0.00%
HV-2	Coal Mines & Cement Ind.	33kV	28	29	29	1	1	0.98%

	Category	Volt-age	Number of consumers at the end of the year			Projected growth in number of consumers		% of total LT/HT Consumers
			FY 2007-08 (Actuals)	FY 2008-09 (Petition)	FY 2009-10 (Petition)	FY 2008-09 (Petition)	FY 2009-10 (Petition)	FY 2009-10 (Petition)
HV-3.1	Other HT Ind.	33kV	364	382	401	18	19	24.74%
HV-3.2		11kV	57	57	57	0	0	0.00%
HV-4.1	Low Load Factor Industries	33kV	121	133	146	12	13	17.23%
HV-4.2		11kV	4	4	5	0	0	0.57%
HV-5.1	Residential Purpose	33kV	27	28	30	1	1	1.84%
HV-5.2		11kV	9	9	10	0	0	0.61%
HV-6.1	General Purpose Non-Industrial	33kV	114	132	153	18	21	26.86%
HV-6.2		11kV	104	120	139	16	19	24.50%
HV-7.1	Public Water works & Irrigation	33kV	17	18	19	1	1	1.17%
HV-7.2		11kV	11	12	12	1	1	0.76%
HV-8	Start-up Power	132 KV	2	2	2	0	0	0.05%
		33kV	10	11	11	1	1	0.68%
		11kV	0	0	0	0	0	0.00%
	Temporary Supply	132 KV	0	0	0	0	0	0.00%
		33/11 kV	0	0	0	0	0	0.00%
HT Total			**1197**	**1266**	**1344**	**69.48**	**77.24**	100.00%
Total (LT+HT)			**2651489**	**2920339**	**3380081**	**268850**	**459741**	

The steep increase in the number of consumers in FY 2008-09 and FY 2009-10 in LT category is stated to be on account of the projected release of 2.40 lakh new domestic Below Poverty Line (BPL) connections as well as around 1.70 lakh new connections to other domestic consumers. CSPDCL has projected a decrease in the number of consumers in public utility category by 4.71% for FY 2008-09.

LT consumers comprise 99.95% of the total consumer base of CSPDCL, with domestic consumers including BPL consumers comprising 84.92% (34.51% domestic and 50.41% domestic BPL, respectively), of the total consumer base; HT consumers comprise merely 0.05%. Out of the total HT consumers, steel industries and other HT industries comprise 24.90% and 35.17%, respectively, while low load factor industries and general (non-industrial) consumers comprise 10.44% and 18.21%, respectively.

5.4.2 Category-wise sales

CSPDCL has projected the category-wise sales for FY 2008-09 and FY 2009-10 on the basis of trend analysis of sales over the last five years. The actual category-wise sales for FY 2007-08, unrestricted sales for FY 2007-08 and the sales projected by CSPDCL for FY 2008-09 and FY 2009-10 are given in the table below:

Table 5.10

Consumer Category-wise Energy Sales (MU)

	Category	Voltage	FY 2007-08 (Actuals)	FY 2007-08 (Unrestricted)	FY 2008-09 (Petition)	FY 2008-09 (Actual)*	FY 2009-10 (Petition)
LT Consumers							
LV-1	Domestic (BPL)		329.4	349.12	695.52	426	776.16
	Other Domestic		1461.09	1548.55	1744.11	1348	1964.35
LV-2	Non-domestic		336.68	356.83	406.34	315	462.71
LV-3.1	Agriculture (metered)		21.59	23.20	149.63	1562	282.11
LV-3.2	Agriculture (flat rate)		751.03	807.12	1057.18		1057.18
LV-4	Agriculture allied services		4.55	4.89	5.18	5	5.44
LV-5	LT Industrial		398.9	439.86	484.85	324	534.44
LV-6	Public Utilities (PWW & SL)		121.12	128.37	142.88	102	159.04
LV	Temporary		75.93	75.93	75.93	72	75.93
		LT Total	**3500.29**	**3733.88**	**4761.61**	**4155**	**4155**
HT Consumers							
EHV-1	Railway Traction	220/132 kV	651.91	651.91	688.82	583	727.82
EHV-2	Heavy Industries	220/132 kV	1734.81	1734.81	1,734.81	1545	1734.81
EHV-3	Steel Industries	220/132 kV	124.89	128.80	128.80	160	353.49
EHV-4	Coal Mines, Cement Ind. & other EHV Consumers	220/132 kV	510.68	526.68	526.68	429	597.63
HV-1	Steel	33kV	2121.29	2187.74	2,187.74	1873	2246.87

	Category	Voltage	FY 2007-08 (Actuals)	FY 2007-08 (Unrestricted)	FY 2008-09 (Petition)	FY 2008-09 (Actual)*	FY 2009-10 (Petition)
	Industries						
HV-2	Coal Mines & Cement Ind.	33kV	207.34	213.83	219.49	172	225.29
HV-3.1	Other HT Ind.	33kV	407.79	420.56	441.59	353	483.38
HV-3.2		11kV	14.8	15.26	15.26	15	15.26
HV-4.1	Low Load Factor Industries	33kV	82.13	84.70	93.17	69	102.49
HV-4.2		11kV	0.67	0.69	0.76	1	0.84
HV-5.1	Residential Purpose	33kV	230.73	237.96	249.85	198	262.35
HV-5.2		11kV	4.24	4.37	4.60	3	4.83
HV-6.1	General Purpose Non-Industrial	33kV	143.84	148.35	171.68	162	198.68
HV-6.2		11kV	50.34	51.92	60.09	51	69.53
HV-7.1	Public Water works & Irrigation	33kV	25.25	26.04	27.36	25	28.74
HV-7.2		11kV	9.5	9.80	10.30	9	10.82
HV-8	Start-up Power	132 KV	5.85	5.85	5.96	94	6.08
		33kV	2.33	2.33	2.45		2.57
		11kV	0	0.00	0.00		0.00
	Temporary Supply	132 KV	16.93	16.93	0.00		0.00
		33/11 kV	4.34	4.34	4.34		4.34
		HT Total	**6349.66**	**6472.87**	**6573.73**	**5742**	**7075.81**
		Total (LT+HT)	**9850**	**10207**	**11335**	**9897**	**12393**

*Actual Sales figures till January 09

For the projection of sales for FY 2008-09 and FY 2009-10, CSPDCL has estimated unrestricted sales for HT and LT categories in FY 2007-08 by adding the quantum of power disruption to actual sales of FY 2007-08. CSPDCL allocated the total supply disruption on account of inadequate energy supply and planned/fault outages in various HT and LT categories, based on the following methodology:

(1) Energy restriction on HT industries is allocated to all consumer categories except Railway traction, Heavy industry, Start-up power and Temporary supply in proportion to the energy recorded by HT category in FY 2007-08
(2) Energy restriction on LT industries is allocated to LV-5 categories of consumers.
(3) Energy restriction on Agriculture pump is allocated to categories like agriculture metered, agriculture flat and agriculture allied service.

(4) The balance load shedding energy has been allocated among the LT category of consumers except for Temporary supply, in proportion to the consumption recorded in FY 2007-08.

Commission's Views

CSPDCL has not submitted the restructured sales data for previous years as per the tariff categories specified in the tariff order of FY 2007-08 in the absence of which the trend analysis is difficult. Hence, the Commission has assumed/approved sales for FY 2008-09 and FY 2009-10, based on the limited data provided by the company. Further, the Commission has obtained actual sales data for FY 2008-09. For the period from April 2008 to January 2009 data for LT categories and from April 2008 to February 2009 for HT categories.

The company has largely used the five-year CAGR for projection of the sales of LT categories for FY 2008-09 and FY 2009-10, except in the following cases:

(a) Un-metered categories like BPL and agriculture, where number of new connections to be released. Normative load factor has been used to project the sales of these categories.

(b) In case of Temporary consumers, where five-year CAGR is negative (-1.46%), CSPDCL has assumed that the sales in FY 2008-09 and FY 2009-10 will remain constant at FY 2007-08 levels.

The consumer category-wise sales as projected by the CSPDCL are discussed below:

A. LT Consumers

1) BPL Consumers

CSPDCL has projected an addition of 2.4 lakh new metered connections for BPL consumers in FY 2008-09 and 2.4 lakh connections in FY 2009-10. Further, the company has submitted that based on the preliminary results of line loss and cost to service study, the average consumption across BPL category has increased to about 80 units/month and that it would initiate a programme for migration of all BPL consumers after installation of meters to the LV-1 category whose consumption is more than 30 units/month. For the projection of sales to BPL consumers for FY 2008-09 and FY 2009-10, CSPDCL has considered the following approach:

- Existing Consumers: The average consumption for 40% of existing BPL consumers has been considered as 80 units per connection per month and for remaining 60% consumers, 40 units per month.
- New Connections: The average consumption for 40% of new connection has been considered in urban areas with 80 units per connection per month and the

remaining 60% consumers has been considered in rural areas with consumption of 40 units per month.

CSPDCL has projected sales to the BPL category during FY 2008-09 and FY 2009-10 as 695.52MU and 776.16MU, respectively.

Commission's views

During the technical validation sessions, the Commission directed CSPDCL to submit the actual connections released during FY 2008-09 against the projected 2,40,000 connections. The actual number of connections released during FY 2008-09 has been 1,28,790 only. Accordingly, the Commission has considered addition of 1,28,790 new consumers during FY 2008-09. For FY 2009-10, although CSPDCL has projected addition of 2.4 lakh connections, the Commission is sceptical about CSPDCL's capability to achieve the same. However, for the purpose of this order, the Commission has accepted these projections. The Commission has assumed that the CSPDCL will add new consumers in an even manner through the year, to achieve the annual target at the end of the year.

CSPDCL has submitted that, it would initiate a programme to migrate all the BPL consumers having consumption of more than 30 units per month to other domestic category after installation of meters. However, the company has considered the sales of all the consumers, including the consumers whose consumption is considered at 80 units/month, under BPL category. The Commission is of the view that for the BPL consumers whose consumption is more than 30 units/month should be considered as part of domestic sales instead of sales under BPL category. In the absence of the actual number of consumers, whose consumption is more than specified for BPL category, the Commission has considered the sales of 40% of the existing consumers to the other domestic category with consumption of 80 units per month, as proposed by CSPDCL. For the new consumers, in rural area with monthly consumption of 80 units per month, the Commission has shifted the sales to other domestic category. However, for projecting the sales for FY 2009-10, the Commission has assumed that the shifting of such BPL consumers to other domestic category will happen in a phased manner during the year. Accordingly, the Commission for such consumers who are to be shifted from BPL to other domestic category has projected the sales by considering consumption as part of BPL category during first six months of the year and by considering consumption as part of other domestic category during next six months of the year. For BPL connections, the Commission has considered a normative consumption of 30 units per month to assess the sales under this category. With these assumptions, the Commission has projected sale to BPL category in FY 2009-10 as 335.17 MU .

2) Other Domestic Consumers

CSPDCL has projected sales to other domestic category for FY 2008-09 and FY 2009-10 using 5-year CAGR of 12.63% over the unrestricted sales of the FY 2007-08. CSPDCL projected and the sales of 1964.35 MU FY 2009-10 for this category.

Commission's views

Based on sales data submitted for ten months (April 2008 to January 2009) of FY 2008-09, the Commission has observed that the actual sales during ten months of the year to this category is 1348.08 MU which on pr-rata basis for entire year works out to 1617.69 MU. The Commission has analysed the year on year sales variations over the last five years and has observed that the annual sales variation has been in the range of 6.37% to 25.28%. The Commission has accepted the approach of using 5-year CAGR for projecting the sales for FY 2009-10 over FY 2008-09 sales, as the five-year growth trend is consistent with the recent trend of year-on-year growth. Further, the Commission has added the consumers of BPL category having consumption of more than 30 units/month under this category for six months i.e., second half during FY 2009-10. The consumption for the BPL consumers considered as part of other domestic consumers is projected based on 80 units/month as proposed by the CSPDCL. With these assumptions, the Commission has projected sale for other domestic category in FY 2009-10 as 2045.42 MU.

3) Non Domestic Consumers

CSPDCL has projected sales to non-domestic consumer category at 406.34 MU for FY 2008-09 and 462.71 MU for FY 2009-10, which is an increase of 13.87% over the unrestricted sales in FY 2007-08, in line with the five-year CAGR in sales for this category.

Commission's views

Based on actual sales data submitted by CSPDCL for ten months (April 2008 to January 2009) of FY 2008-09, the Commission has observed that the actual sales during ten months has been 315.08 MU which on pr-rata basis for entire year works out to 378.10 MU. The Commission has accepted the approach of using 5-year CAGR for projecting the sales for FY 2009-10 over FY 2008-09 sales, as the five-year growth trend is consistent with the recent trend of year-on-year growth. The projected sales for FY 2009-10 for non domestic category is 430.55 MU.

4) Agriculture Consumption

CSPDCL has projected the sales for agriculture category taking into account release of 70,000 new metered connections in the span of four years which starts from FY 2008-09. Further, 18000 new meter connections in FY 2008-09 and 20,000 new meter connection in FY 2009-10 have been projected. An average load of 4 HP per connection has been considered as approved by the Commission in the previous tariff orders and a load factor of 25.34% (or 138 units/HP/month), based on the preliminary results of the line loss and cost of supply study carried out as per the directive of the Commission. CSPDCL has projected 149.63 MU energy consumption in FY 2008-09 and 282.11 MU in FY 2009-10 for metered connections and 1057.18 MU in FY 2008-09 and FY 2009-10 under the un-metered category for both the years.

Commission's views

During the technical validation session, the Commission asked CSPDCL to submit the actual connections released during FY 2008-09 against CSPDCL projections of 18000 connections. CSPDCL submitted the number of connections released during FY 2008-09 as 27,000. Accordingly, the Commission has considered 27000 new consumers added by CSPDCL during FY 2008-09. For FY 2009-10, the Commission has accepted 20,000 new connections.

The Commission in its tariff order for FY 2007-08 had approved the load factor of 18% for assessing the agricultural consumption based on erstwhile CSEB's submissions. CSPDCL while projecting the sales for FY 2009-10 has considered a load factor of 25.34% based on preliminary results of the line loss study being carried out by M/s SNC Lavalin.

During the technical validation sessions CSPDCL was asked to submit the reasons for high load factor of 25.34% in Chhattisgarh which is higher even as compared to agriculture rich States such as Punjab and Haryana. The Commission further asked CSPDCL to submit the actual load factor. In its reply the company has submitted the details of month-wise consumption data captured from January 2008 to December 2008 for each circle.

The study being carried out by M/s SNC Lavalin is yet to be completed and in the absence of final report of the study, the Commission has on provisional basis, considered the load factor of 25.34% as proposed by CSPDCL for projecting the sales for FY 2009-10. The Commission will approve the load factor for assessing the agricultural consumption based on the final report on the study while truing up the ARR and revenue for FY 2009-10.

4) Agriculture Allied Services

CSPDCL has considered 5% growth for projecting sales of FY 2008-09 and FY 2009-10, over the unrestricted energy consumption for FY 2007-08. CSPDCL has projected 5.18 MU consumption for FY 2008-09 and 5.44 MU consumption for FY 2009-10.

Commission's views

In the absence of data for previous year's, the Commission has approved the growth rate of 5% per annum over the actual sales of FY 2007-08 for projecting sales during FY 2009-10 and the sales projected by Commission for this category for FY 2009-10 is 5.02 MU.

5) LT Industries

CSPDCL has projected sales to LT Industries consumer category at 484.85 MU for FY 2008-09 and 534.44 MU for FY 2009-10, which is an increase of 10.23% over the unrestricted sales in FY 2007-08, in line with the five-year CAGR in sales for this category.

Commission's views

Based on actual sales data submitted by CSPDCL for ten months (April 2008 to January 2009) of FY 2008-09, the Commission has observed that the actual sales during ten months of FY 2008-09 to this category has been 324.40 MU which, if projected for the entire year, works out to 389.28 MU. The Commission has accepted the approach of using 5-year CAGR for projecting the sales for FY 2009-10 over FY 2008-09 sales, as the five-year growth trend is consistent with the recent trend of year-on-year growth. The Commission has projected sales of 484.68 MU sales for FY 2009-10 for this category.

6) Public Utilities

CSPDCL has projected sales to public utilities at 142.88 MU for FY 2008-09 and 159.04 MU for FY 2009-10, which is an increase of 11.31% over the unrestricted sales of FY 2007-08, in line with the five-year CAGR in sales for this category.

Commission's views

Based on sales data submitted by CSPDCL for ten months (April 2008 to January 2009) of FY 2008-09, the Commission has observed that the actual sales during these ten months to this category is 101.84 MU which, when projected for the entire year, works out to 122.21 MU. The Commission has accepted the approach of using 5-year CAGR for projecting the sales for FY 2009-10 over FY 2008-09 sales, as the five-year growth trend is consistent with the recent trend of year-on-year growth. The Commission has projected sales of 136.03 MU sales for FY 2009-10 for this category.

7) Temporary Connections

CSPDCL has not projected any growth to sales to temporary LT connections and retained at the level of FY 2007-08 of 75.93 MU sales for FY 2008-09 and FY 2009-10, to reflect negative growth trend for past year.

Commission's views

The Commission has projected the sales for FY 2009-10 by considering a nominal increase of 2% per annum on actual sales for FY 2007-08. The total sales projected by the Commission for FY 2009-10 for this category is 79 MU.

B. HT Consumers

1) EHV-1 Railway Traction

CSPDCL has projected sales to Railway traction category at 688.82 MU for FY 2008-09 and 727.82 MU for FY 2009-10, which is an increase of 5.66% over the unrestricted sales of FY 2007-08, in line with the five-year CAGR in sales for this category. The Commission has accepted this projection, as the sale to this category has shown a sustained growth over the last five years.

2) EHV-2 Heavy Industries

CSPDCL submitted that the Heavy Industry category has recorded a growth of 2.01%. Further, this category has a very limited number of consumers and one of the major consumer, Bhilai Steel Plant likely to commission its captive power plant, which would result in reduction of demand of this category. CSPDCL has not projected any growth in the sales to this category for FY 2008-09 and FY 2009-10 and retained the sales at level of FY 2007-08, at 1734.81 MU. The Commission has accepted the CSPDCL's projection to retain the sales at level of FY 2007-08 for FY 2009-10 for this category, considering the views of CSPDCL.

3) EHV-3 Steel Industries

CSPDCL has submitted that the sales to this category has recorded a 5-year CAGR of 38.53%. However, due to installation of captive power plants by many industries and the current economic recession in the steel industry, it has been estimated that the demand of steel industries would go down. The company has not projected any growth in the demand of this category and retained the consumption for FY 2008-09 and FY 2009-10 at 124.89 MU as in FY 2007-08. CSPDCL has added 224.143 MU sales to new consumers in FY 2009-10, based on the requisition of supply by assuming a load factor of 50% and power factor of 0.9 for the new consumers.

Commission's views

Based on sales data submitted by CSPDCL for eleven months (April 2008 to February 2009) of FY 2008-09, the Commission has observed that the actual sales during eleven months of FY 2008-09 is 166.13 MU which when projected for the entire year works out to 181.23 MU. Thus the sales during FY 2008-09 based on 11 months actual data is substantially higher than the actual sales for FY 2007-08 and hence the assumption of CSPDCL for retaining the consumption for this category during FY 2008-09 and FY 2009-10 at FY 2007-08 level is not correct. However, the 5 year CAGR of sales for this category is 37.95% and it will not be appropriate to project the sales considering the increase equivalent to 5 years CAGR due to recession. The Commission for existing consumers has projected the sales for FY 2008-09 by considering an increase of 15% per annum on the sales for FY 2008-09. . As regard to the new connections to be released during FY 2009-10, the Commission has accepted the consumption of 224.14 MU for FY 2009-10. With these assumptions, the total sales projected for FY 2009-10 for this category is 433.10 MU

4) EHV-4 Coal, Cement and others

CSPDCL has not projected any growth to sales to this category for FY 2008-09 and FY 2009-10 and retained the sales level of FY 2007-08 at 510.68 MU, due to installation of captive plants by many consumers in this category. CSPDCL has also submitted sales to new consumers in FY 2009-10 to the extent of 70.96 MU, based on the requisition of supply by assuming a load factor of 50% and power factor of 0.9 for the new consumers.

Commission's views

As per the sales data submitted by CSPDCL, the actual sales during eleven months of FY 2008-09 (April, 2008 to February, 2009) to this category is 451.06 MU which when projected for the entire year works out to 492.06 MU. The 5 year CAGR of sales for this category is 2.66%. For existing consumers sales are projected by considering an increase of 2.66% per annum on the sales for FY 2008-09. As regard to the new connections to be released during FY 2009-10, the Commission has accepted the consumption of 70.86 MU for FY 2009-10. With these assumptions, the total sales projected by the Commission for FY 2009-10 for this category is 572.98 MU.

5) HV-1 Steel Industry

CSPDCL has not projected any growth in sales to this category for FY 2008-09 and FY 2009-10 and retained the sales level of FY 2007-08 at 2121.91 MU, due to installation of captive plants by many industries and in the view of economic slow down. CSPDCL also proposed 59.13MU sales to new consumers in FY 2009-10, based on the requisition of supply, assuming a load factor of 50% and power factor of 0.9 for the new consumers.

Commission's views

As per the sales data submitted by CSPDCL for eleven months (April 2008 to February 2009) of FY 2008-09, the actual sales during these eleven months to this category has been 2068.19 MU which when projected for the entire year works out to 2256.20 MU. Thus the sales during FY 2008-09 based on actual data for 11 months is higher than the actual sales for FY 2007-08 and hence the assumption of CSPDCL for retaining the consumption for this category during FY 2008-09 and FY 2009-10 at FY 2007-08 is not correct. However, the 5 year CAGR of sales for this category is 38.53% and it will not be appropriate to project the sales considering the increase equivalent to 5 years CAGR due to the recession in the steel industry. The Commission for existing consumers has projected the sales by considering an increase of 5% per annum over sales of FY 2008-09. As regard to the new connections to be released during FY 2009-10, the Commission has projected a consumption level of 59.13 MU for FY 2009-10. With these assumptions, the total sales projected by the Commission for FY 2009-10 for this category is 2428.15 MU.

6) HV-2 Coal mines and Cement industries

CSPDCL has projected sales to HV-2 category at 219.49MU for FY 2008-09 and 225.29MU for FY 2009-10, which is an increase of 2.64% over the unrestricted sales of FY 2007-08, in line with the five-year CAGR in sales for this category.

Commission's views

As per the sales data submitted by CSPDCL for eleven months (April 2008 to February 2009) of FY 2008-09, the actual sales during these eleven months to this category has been 189.26 MU which when projected for the entire year works out to 206.46 MU. The Commission for existing consumers has projected the sales by considering an increase of 1.98% based on recomputed 5 years CAGR over sales of FY 2008-09. With these projections, the total sales projected by the Commission for FY 2009-10 for this category is 210.55 MU.

7) HV-3 Other HT industries

CSPDCL submitted that HV-3 category has recorded a 5-year CAGR of 1.18%, however, CSPDCL has estimated 5% growth rate for consumption at 33 kV level over the unrestricted sales for FY 2007-08, as the state of Chhattisgarh is attracting many investors in recent years. However for supply at 11kV level, CSPDCL has not projected any increase and has retained the unrestricted consumption of FY 2007-08. The projected energy consumption is 441.59MU for FY 2008-09 and 463.67MU in FY 2009-10 at 33kV level and 15.26 MU for FY 2008-09 and FY 2009-10 at 11kV level.

Commission's views

From the data submitted by CSPDCL for eleven months (April 2008 to February 2009) of FY 2008-09, the Commission has observed that the actual sales during eleven months of FY 2008-09 at 33 kV level is 385.56 MU and at 11 kV is 16.27 MU which when projected for the entire year works out to 420.61 MU and 17.75 MU at 33 kV and 11 kV respectively. The Commission has projected the sales by considering an increase of 5% over sales of FY 2008-09. The total sale projected by the Commission for FY 2009-10 for this category at 33 kV and 11 kV is 461.35 MU and 18.64 MU respectively.

8) HV-4 Low load factor industries

CSPDCL has projected sales to Low load factor industries category, considering a growth rate of 10% over the unrestricted sales of FY 2007-08, for both 33kV and 11kV level supply. This category has recorded a 2-year CAGR of 11.17% and due to economic recession, CSPDCL has considered a limited growth for sales projections for FY 2008-09 and FY 2009-10. CSPDCL has projected energy consumption is 93.17 MU for FY 2008-09 and 102.49 MU for FY 2009-10 at 33kV level and 0.76 MU for FY 2008-09 and 0.84 MU for FY 2009-10 for 11kV level.

Commission's views

As per the data submitted by CSPDCL for eleven months (April 2008 to February 2009) of FY 2008-09, the actual sales during these eleven months at 33 kV level has been 75.15 MU and at 11 kV is 0.86 MU. If projected for the entire year the consumption level works out to 81.98 MU and 0.93 MU at 33 kV and 11 kV respectively. For projecting the sales for FY 2009-10, the Commission has accepted an increase of 10% as proposed by CSPDCL. The Commission has projected the sales by considering an increase of 10% over sales of FY 2008-09. The total sale projected by the Commission for FY 2009-10 for this category at 33 kV and 11 kV is 90.18 MU and 1.03 MU respectively.

9) HV-5 Residential

The Residential category has recorded a year-on-year growth of 8.18%, due to reclassification of the consumers. CSPDCL has considered 5% growth over the unrestricted sales of FY 2007-08, for projecting sales under this category. CSPDCL has projected energy consumption of 249.85 MU for FY 2008-09 and 262.35 MU for FY 2009-10 at 33kV level and at 11kV level, 4.6 MU sales has been projected for FY 2008-09 and 4.83 MU for FY 2009-10.

Commission's views

From the data submitted by CSPDCL for eleven months (April 2008 to February 2009) of FY 2008-09, it is observed that the actual sales during these eleven months at 33 kV level is 217.03 MU and at 11 kV is 2.82 MU which when projected for the entire year works out to 236.76 MU and 3.07 MU at 33 kV and 11 kV respectively. For projecting the sales for FY 2009-10, the Commission has accepted an increase of 5% as proposed by CSPDCL. The Commission has projected the sales by considering an increase of 5% over sales of FY 2008-09. The total sale projected by the Commission for FY 2009-10 for this category at 33 kV and 11 kV is 248.60 MU and 3.23 MU respectively.

10) HV-6 General purpose non-residential

This category has recorded a 5-year CAGR of (-8.25%) as the energy consumption under this category has reduced from 308 MU in FY 2002-03 to 200 MU in FY 2007-08 (the unrestricted energy). The reduction in consumption over the past years has happened due to reclassification of consumers. CSPDCL has projected consumption for FY 2008-09 and FY 2009-10 using the two year CAGR of 15.73%. CSPDCL has projected energy consumption of 171.68 MU for FY 2008-09 and 198.68 MU for FY 2009-10 at 33kV level and 60.09 MU for FY 2008-09 and 69.53 MU for FY 2009-10 at 11kV level.

Commission's views

As per the data submitted by CSPDCL the actual sales during eleven months of FY 2008-09 at 33 kV level has been 176.25 MU and at 11 kV is 55.12 MU which on pro-rata basis for the entire year works out to 192.28 MU and 60.13 MU at 33 kV and 11 kV respectively. For projecting the sales for FY 2009-10, the Commission has accepted an increase of 15.73% based on 2 years CAGR as proposed by CSPDCL. The Commission has projected the sales by considering an increase of 15.73% over sales of FY 2008-09. The total sale projected by the Commission for FY 2009-10 for this category at 33 kV and 11 kV is 222.52 MU and 69.59 MU respectively.

11) HV-7 Public Water works & Street lights

CSPDCL has projected sales to this category by considering 5-year CAGR of 5.06% over the unrestricted sales of FY 2007-08. CSPDCL has projected energy consumption of 27.36 MU for FY 2008-09 and 28.74 MU for FY 2009-10 at 33kV level and 10.3 MU for FY 2008-09 and 10.82 MU for FY 2009-10 at 11kV level.

Commission's views

Sales during eleven months of FY 2008-09 at 33 kV level has been 26.80 MU and at 11 kV a 10.09 MU which if projected for the entire year works out to 29.24 MU and 11.00 MU at 33 kV and 11 kV respectively. For projecting the sales for FY 2009-10, the Commission has considered a growth of 4.77% for 33 kV level and 3. 5% for 11 kV level based on recomputed 5-year CAGR over sales of FY 2008-09. The total sale projected by the Commission for FY 2009-10 for this category at 33 kV and 11 kV is 30.64 MU and 11.39 MU respectively.

12) HV-8 Start-up power

CSPDCL submitted that the start-up power availed at 400kV level by Lanco Amarkanthak, which is one of the IPPs from erstwhile CSEB, has been billed at tariff charges of 132kV supply under the Start-up category and the energy consumed by this consumer has also been clubbed under the 132 kV supply, in the absence of any separate category for the consumers availing power at 400kV. For projecting the sales at 132 kV, CSPDCL has considered a growth rate equivalent to 5 years CAGR and for sales at 33 kV level, CSPDCL has considered a growth of 5%

Commission's views

The Commission has accepted the CSPDCL's projections of sales of 6.08 MU at 132 kV and 2.57 MU at 33 kV.

13) Temporary

CSPDCL submitted that as temporary supply requirement from any consumer happens on incidental basis, it has not considered any consumption at EHV level. CSPDCL has proposed to retain the consumption at FY 2007-08 at HV level. CSPDCL has projected sales for Temporary category as 4.34 MU.

Commission's views

The Commission is of the view that it is not appropriate to not project the sales for temporary supply at EHV level. The Commission has projected the sales for FY 2009-10 by considering a nominal increase of 2% per annum on actual sales for FY 2007-08.

The total sales projected by the Commission for FY 2009-10 for this category is 17.61 MU at EHV level and 4.52 MU at HV level.

Table 5.11

Approved Sales for FY 2009-10

	Category	Voltage	Petition by CSPDCL	Approved by the Commission
			FY 2009-10	FY 2009-10
LT Consumers				
LV-1	Domestic (BPL)		776.16	335.17
	Other Domestic		1964.35	2045.42
LV-2	Non-domestic		462.71	430.55
LV-3	Agriculture (metered) & Unmetered		1339.29	1309
LV-4	Agriculture allied services		5.44	5.02
LV-5	LT Industrial		534.44	484.68
LV-6	Public Utilities (PWW & SL)		159.04	136.03
LV	Temporary		75.93	79.00
LT Total			**5317.35**	**4825**
EHV-1	Railway Traction	220/132 kV	727.82	727.81
EHV-2	Heavy Industries	220/132 kV	1734.81	1734.81
EHV-3	Steel Industries	220/132 kV	353.49	433.10
EHV-4	Coal Mines, Cement Ind. & other EHV Consumers	220/132 kV	597.63	572.98
HV-1	Steel Industries	33kV	2246.87	2428.15
HV-2	Coal Mines & Cement Ind.	33kV	225.29	210.55
HV-3.1	Other HT Ind.	33kV	483.38	461.35
HV-3.2		11kV	15.26	18.64
HV-4.1	Low Load Factor Industries	33kV	102.49	90.18
HV-4.2		11kV	0.84	1.03
HV-5.1	Residential Purpose	33kV	262.35	248.60
HV-5.2		11kV	4.83	3.23
HV-6.1	General Purpose Non-Industrial	33kV	198.68	222.52
HV-6.2		11kV	69.53	69.59
HV-7.1	Public Water works & Irrigation	33kV	28.74	30.64
HV-7.2		11kV	10.82	11.39
HV-8	Start-up Power	132 KV	6.08	6.08
		33kV	2.57	2.57
		11kV	0.00	0.00
	Temporary Supply	132 KV	0.00	17.61
		33/11 kV	4.34	4.52
HT Total			**7075.81**	**7295**
Total (LT+HT)			**12393**	**12121**

5.4.3 Distribution Losses and Energy Input Requirement

Distribution loss

As discussed in Section 5.2, CSPDCL, in its petition, has submitted that it could not achieve the distribution losses target for FY 2007-08. It has proposed reduction of distribution losses by 2% in FY 2008-09 and 1.5% in FY 2009-10 over the actual distribution losses of 39.32% at distribution periphery.

Commission's Views

The Commission has observed in its previous tariff orders that given the favourable HT:LT consumer and consumption mix, the distribution losses of CSEB are very high. The Commission is of the view that till 100% metering is completed, distribution losses can not be accurately arrived at since the consumption for un-metered BPL consumers and agricultural is assessed and is not actual consumption. In compliance with the Commission's directions, the erstwhile CSEB has appointed a reputed consultant M/s SNC Lavalin for carrying out the detailed study on line losses. The study is yet to be completed. Since the results of this study are not available, the Commission has considered the actual losses for FY 2007-08 as reported by CSPDCL as base figures.

Further, Clause 5.3(h)(2) of the Tariff Policy notified by the Central Government, dealing with operational norms, stipulates that

> *"In cases where operations have been much below the norms for many previous years the initial starting point in determining the revenue requirement and the improvement trajectories should be recognized at "relaxed" levels and not the "desired" levels."*

Hence, considering the practical aspect, and the fact that the actual distribution loss levels are being reported as 39.32% in FY 2007-08, the Commission is left with no option but to revise the loss reduction target. For FY 2008-09, as the year is already complete, the Commission has accepted the distribution loss reduction target of 2% as proposed by CSPDCL. However, for FY 2009-10, the Commission is of the view that the 1.5% distribution loss reduction target proposed by CSPDCL is on the lower sie. The Commission has considered the observations of the Task Force (Abraham Committee) on Loss Reduction in this regard.

Abraham Committee Observations on Loss Reduction

The recommendations of the Task Force (Abraham Committee) with regard to Restructuring of APDRP for supporting Reforms in the State Power Utilities and specifically for loss reduction have been summarized below:

"AT&C Loss Reduction Targets

The Task Force examined the targets set for AT &C losses reduction and after taking into consideration experience of the Utilities felt that the targets should be recast in a manner ***that they are realistic and achievable based on the present level of AT&C losses in each State****. Accordingly the Task Force recommends the following targets depending on their present level of AT&C losses:*

i) Utilities having AT&C losses above 40%: Reduction by 4% per year

ii) Utilities having AT&C losses between 30 & 40%: Reduction by 3% per year

iii) Utilities having AT&C losses between 20 & 30%: Reduction by 2% per year

iv) Utilities having AT&C losses below 20%: Reduction by 1% per year

The targets will change from one slab to another on shifting of the AT&C losses from one level to another level"

Considering these recommendations, the Commission directs the CSPDCL to reduce the distribution losses during FY 2009-10 by 3%. Hence the Commission for estimating the energy input requirement of CSPDCL for FY 2009-10 has considered the distribution loss of 34.32% (39.32% for FY 2007-08 less 2% for FY 2008-09 and 3% for FY 2009-10).

Table 5.12

Distribution Losses –Approved for FY 2009-10

Sl.	Particulars	CSPDCL Projection	Approved by Commission
	Transmission Loss		
1	Energy Input to transmission system (MU)	16982	16609
2	Energy output to distribution interface (MU)	16132	15796
3	Transmission Loss (MU)	850	814
4	**Transmission Loss (%)**	**5.01%**	**4.90%**
	Distribution Loss		
5	Energy Input to distribution system (MU)	16132	15796
6	Sale at EHV level(MU)	3420	3469
7	Add: Input to Distribution System at 33 kV (MU)	1270	846
8	Energy required at Distribution Periphery below EHV level (MU)	13982	13173
9	Energy Sales (MU) below EHV level	8973	8652
10	Distribution Loss (MU)	5009	4521
11	**Distribution Loss (%)**	**35.82%**	**34.32%**

Energy Requirement

The energy requirement is the sum of energy sales and losses in the system. The energy requirement projected by the CSPDCL and as approved by the Commission for FY 2009-10 is given in the table below:

Table 5.13

Energy Requirement (MU)

Particulars	CSPDCL Projection	Approved by Commission
LT Sales (MU)	5317	4825
HT Sales (MU) at 33/11 kV level	3656	3827
Total Sales below EHV level (MU)	**8973**	**8652**
Distribution loss (%)	**35.8%**	**34.32%**
Distribution loss (MU)	5009	4521
Energy required at Distribution Preiphery below EHV level (MU)	**13982**	**13173**
less: Input to Distribution System at 33 kV (MU)	1270	846
Net Energy required from other sources at Distribution Periphery (MU)	12712	12327
Sale at EHV level(MU)	3420	3469
Total Energy Required at Distribution Periphery (MU)	**16132**	**15796**
Transmission loss(%)	**5.01%**	**4.90%**
Transmission loss(MU)	850	814
Net Energy required at Transmission Periphery (MU)	**16982**	**16609**
Total Energy Requirement of CSPDCL including energy input at 33 kV	**18252**	**17455**

5.4.4 Power Purchase from Different Sources

5.4.4.1 Sources of Power Purchase

CSPDCL has following existing primary sources of firm power on long term PPA basis, viz.,

- CSPGCL
- Central Generating Stations (CGS)
- Biomass based Power Generating stations
- NSPCL
- JSPL (70 MW)

In addition to the above sources, CSPDCL buys power from IPPs and from captive plants in the State and from traders wherever or whenever required to meet its demand.

5.4.5 Purchase of Energy

The total power to be purchased in FY 2009-10 after inter-State transmission losses has been assessed by CSPDCL at 7351 MU. The summary of the total quantum of power purchase and power purchase cost as projected by CSPDCL is given below:

Table 5.14

Power Purchase Quantum and Cost Projected by the CSPDCL for FY 2009-10

Sl.	Particulars	Quantum	Total Cost	Average Rate
		MU	Rs. Crore	Rs./kWh
1	Central Sector Stations	4583	869	1.90
2	Captive Stations	599	135	2.26
3	Bio Mass	614	168	2.74
4	IPPs	1555	392	2.52
5	**TOTAL**	**7351**	**1564**	**2.13**

5.4.5.1 Power Purchase from Central Generating Stations (CGS)

CSPDCL has a firm allocation of share of power from generating stations of NTPC and Nuclear Power Corporation (NPC) stations. In addition to the firm share allocation, most of these stations have 15% unallocated power. The distribution of this unallocated power among the constituents of Western Region is decided by Ministry of Power, Govt. Of India from time to time based on the power requirement and power shortage in different States.

In addition to the share from these Central generating stations (CGS), CSPDCL also procures power from the Eastern Region stations of NTPC, viz., Kahalgaon Thermal Power station, Farakka Super Thermal Power station and Talcher Super Thermal Power station.

CSPDCL has submitted that the quantum of power purchase from CGS stations is computed as per allocation by Government of India. CSPDCL has considered allocation of 555.55 MW from existing CGS. For new central generating stations, CSPDCL has considered allocation of 79 MW from SSTPS – II in FY 2008-09 and 104 MW from SSTPS-I & another 158 MW from SSTPS-II in FY 09-10. CSPDCL for projecting the net energy availability during FY 2009-10 has considered the external transmission losses of 4.69% for power to be obtained from Western Region Generating Stations and 8.77% for power to be received from ER generating stations.

For projecting the power purchase costs from CGS, CSPDCL has projected the average per unit rate by considering an escalation of 5% on actual average per unit power purchase rates of FY 2007-08

Commission's views

For projecting the energy availability from Western Region Central generating stations during FY 2007-08, the Commission has considered the allocation of power (firm share of Chhattisgarh as well as unallocated power) based on the latest allocation. For projecting the energy availability from Eastern Region Central generating stations, the Commission has taken into account the allocation of power (unallocated quota allocated to the State) based on the latest allocation. During the technical validation sessions, CSPDCL submitted that the first unit of Sipat Stage I is expected to be commissioned by the end of FY 2009-10 and hence the projected power of 104 MW allocated from this station is unlikely to be received in FY 2009-10

The summary of the total CGS share available to CSEB during FY 2009-10 is given in the table below:

Table 5.15

CSPDCL Share of Central Generation Stations (MW)

		CSPDCL Petition			Considered by Commission		
Sl.	**Name of Power Station**	**Firm Allocation**	**Unallocated Power**	**Total Share**	**Firm Allocation**	**Unallocated Power**	**Total Share**
1	Korba STPS	210	23.15	233.15	210	36.51	246.51
2	Vindhyachal STPS I	0	16.64	16.64	0	26.23	26.23
3	Vindhyachal STPS II	0	13.37	13.37	0	21.07	21.07
4	Vindhyachal STPS III	105	13.5	118.5	105	21.29	126.29
5	Kawas GPP	0	8.76	8.76	0	13.81	13.81
6	Jhanor (Gandhar) GPP	0	8.86	8.86	0	13.96	13.96
7	Kakrapar APS	0	5.94	5.94	0	9.37	9.37
8	Tarapur APS	48	14.58	62.58	48	22.99	70.99
9	SSTPS	79	6.75	85.75	158	21.29	179.29
10	Hirakud	2		2		2	2
11	Farraka					8.13	8.13
12	Kahalgaon					4.27	4.27
13	Talcher					5.08	5.08
14	Kahalgaon II				20	0	20
	Subtotal	**444**	**111.55**	**555.55**	**541**	**206**	**747**

The Commission has assumed PLF of 85% and auxiliary consumptions as per CERC Regulations, 2009 for projecting the energy availability from thermal stations of central sector. For combined cycle stations, the Commission has considered the PLF of 80% based on past trends. For nuclear stations, the Commission has projected gross generation, based on the past trends. For estimating the net energy availability, the Commission has considered regional transmission losses of 4.69% and 8.77% for Western and Eastern Region respectively.

During the technical validation sessions, the Commission asked CSPDCL for copies of the latest power purchase bills for purchase from CGS. Copies of power purchase bills for the month of February 2009 have been submitted.

The Commission has considered the fixed cost of existing NTPC stations based on the Annual Fixed Charges as per the CERC orders for each respective station. The variable charge have been considered for all the existing NTPC stations based on the latest actual variable charges including FPA for the month of February 2009. The Commission has considered other charges payable to CGS which includes incentive, income tax etc. as estimated by CSPDCL in its petition. The power purchase cost for Kakrapar station has been taken as per the tariff notified by Department of Atomic Energy (as available on the CEA website). The summary of quantum of power purchase and power purchase costs from CGS as projected by CSPDCL and as approved by the Commission are given in the following Table:

Table 5.16
Summary of Power Purchase from CGS FOR FY 2009-10

Stations	CSPDCL			Approved by Commission		
	Quantum	Total Cost	Average Rate	Quantum	Total Cost	Average Rate
	MU	Rs Crore	Rs/unit	MU	Rs Crore	Rs/unit
JGPS (Gandhar)	56.71	11.52	2.03	90.4	20.11	2.22
KGPS (kawas)	50.68	22.11	4.36	89.5	17.61	1.97
KSTPS (korba)	1595.23	202.47	1.27	1600.7	202.71	1.27
VSTPS I (Vindhyachal)	107.26	21.87	2.04	170.3	34.89	2.05
VSTPS II	86.39	16.98	1.97	136.8	34.16	2.50
VSTPS III	668.07	138.23	2.07	820.1	195.18	2.38
Kakarapar	27.49	6.06	2.20	49.3	11.06	2.24
Tarapur 3 & 4	317.25	107.86	3.40	320.1	110.87	3.46
SSTPS I	635.60	127.66	2.01			
SSTPS II	1032.06	213.54	2.07	1164.2	214.95	1.85
Farraka				50.5	16.67	3.30
Kahalgaon				26.5	6.88	2.59
Talcher				31.6	5.83	1.84
Kahalgaon II				124.3	32.79	0.00
Hirakund	6.65	0.52	0.78	6.6	0.52	0.78
Total	**4583.39**	**868.81**	**1.90**	**4681.1**	**904.22**	**1.93**

5.4.5.2 Power Purchase from Biomass based Generating plants

CSPDCL, in its petition, has submitted that the erstwhile CSEB had entered into agreement to purchase power from 13 Biomass based plants having a total capacity of 120.92 MW. For FY 2009-10, CSPDCL has estimated power purchase of 614 MU from biomass based generating plants.

The Commission has accepted CSPDCL's projections towards quantum of power purchase of 613.94 MU and power purchase costs of Rs. 2.74 per unit for biomass based generation plants.

5.4.5.3 Power Purchase from Independent Power Projects (IPPs)

CSPDCL, in its petition has submitted that in FY 2007-08 the total power purchase, from IPPS was 943 MU, at an average cost of Rs 2.59/kWh. During FY 2008-09, the total purchase of 2234 MU has been estimated at an average rate of 2.40/kWh. For FY 2009-10, CSPDCL has projected the power purchase of 1555 MU from IPPs at an average cost of Rs. 2.52 per unit considering 5% escalation over average purchase cost of FY 2008-09.

Commission's views

During the technical validation sessions, the Commission asked the CSPDCL to submit the details of power purchase from IPPs and status of agreements. CSPDCL submitted that it has a power purchase agreement with NSPCL and JSPL for purchase of power during FY 2009-10. CSPDCL further submitted that the 150 MW short term PPA with Jindal Power is under execution.

As per the submissions made by CSPDCL, it has a long-term agreement only with (NTPC SAIL Power Company Limited) NSPCL and JSPL for purchase of power. From other IPPs, power is purchased on short term basis. For projecting the energy purchase from IPPs during FY 2009-10, the Commission has considered the energy availability from Jindal Power Ltd considering the agreement for 150 MW and assuming a PLF of 70%. For other IPPs, the Commission has accepted the CSPDCL's projections.

The Commission has projected the power purchase cost for purchase of power from IPPs considering the average rates proposed by CSPDCL as the CSPDCL has factored an increase of 5% over FY 2008-09 rates. The summary of the quantum and cost of power purchase from IPPs as projected by CSEB and approved by Commission are given in the table below:

Table 5.17

Summary of Power Purchase from IPPs for FY 2009-10

Source	CSPDCL			Approved by Commission		
	Energy Purchase	Rate	Total Cost	Energy Purchase	Rate	Total Cost
	MU	Rs/unit	Rs Crore	MU	Rs/unit	Rs Crore
IPPs						
M/s Aryan Coal Benification	90.82	2.90	26.32	90.82	2.90	26.32
Jagdamba Power & Ispat	54.42	2.89	15.71	54.42	2.89	15.71
Abhijeet Infrastructure Ltd	53.38	2.51	13.41	53.38	2.51	13.41
Jindal Power Limited Raigarh (4*250)	870.02	2.43	211.13	837.02	2.43	203.12
Bhilai Electric Supply Company (NSPCL)	438.00	2.52	110.45	438.00	2.52	110.45
Salasar Sponge & Power Ltd	48.23	3.12	15.07	48.23	3.10	14.97
Total	**1554.87**	**2.52**	**392.08**	**1521.87**	**2.52**	**383.98**

5.4.5.4 Power Purchase from Captive Power Plants

CSPDCL, in its petition has submitted that in FY 2007-08 the total power purchase from captive units of total capacity 151.5 MW is 1143 MU at average cost of Rs 2.18 per unit. CSPDCL submitted that even though the year-on-year basis of contract for purchase of power from CPPs has not been concluded for the current financial year in all cases, some of the CPPs are supplying power in the intra-state grid and this power is being reflected in increase of energy supply from CPPs irrespective of any agreement being in place. For FY 09-10, as some of the CPPs may resort to sale in open access and hence CSPDCL has projected power puchase only to the extent of 50% or energy projected in FY 2008-09. CSPDCL has projected the power purchase of 599 MU from CPPs at an average cost of Rs. 2.26 per unit considering 5% escalation over average purchase cost of FY 2008-09.

Commission's views

During the technical validation session, CSPDCL submitted that the power purchase agreement has been executed with Jindal Steel & Power Limited (JSPL) for purchase of 120 MW power. CSPDCL further submitted that the average PLF of JSPL, based on the power purchased during previous years, works out to 65%. The Commission has therefore considered the power purchase of 120 MW from JSPL at 65% PLF for FY 2009-10. For projecting the power purchase costs from JSPL, the Commission has considered an average rate of Rs 2.32/kWh based on the agreement, as against average rate of Rs 2.49/kWh considered by CSPDCL.

Based on submissions made by CSPDCL, and considering that it has a long term agreement only with JSPL for purchase of power, and CSPDCL purchases power on short term basis. The Commission has accepted the CSPDCL's projections of power purchase quantum and costs during FY 2009-10 as it is in line with the order passed by the Commission in suo moto petition no. 9/2009 in the matter of pricing of CPP/IPP power for purchase by CSPDCL. The summary of the quantum of power purchase and cost from CPPs as projected by CSPDCL and approved by Commission are given below:

Table 5.18

Summary of Purchase of Power from CPPs for FY 2009-10

	CSPDCL			Approved		
Source	**Energy Purchase**	**Rate**	**Total Cost**	**Energy Purchase**	**Rate**	**Total Cost**
	MU	**Rs/unit**	**Rs Crore**	**MU**	**Rs/unit**	**Rs Crore**
Captive Power Plant						
Jindal Steel & Power Supply Limited	226.24	2.49	56.44	621.79	2.32	144.25
BALCO	55.87	1.61	8.98	55.87	1.61	8.98
Other CPPs	317.00	2.21	69.92	317.00	2.21	69.92
Total	**599.11**	**2.26**	**135.33**	**994.65**	**2.24**	**223.15**

5.4.5.5 External Transmission Charges to PGCIL

CSPDCL in its petition submitted that the transmission charges payable to M/s PGCIL is increased by 7.7% to account for the transmission charges of the new lines being added by PGCIL in the western grid. For FY 2009-10, CSPDCL has projected the transmission charges of Rs 67.4 Crore and the Commission approves the same considering the prevalent transmission charges of Western and Eastern Region..

5.4.5.6 Demand Requirement and Energy Balancing

CSPDCL in its petition has submitted that the total energy availability estimated for FY 2009-10 is more than the energy requirement by around 839 MU mainly in off-peak hrs. The company has further submitted that the maximum demand recorded during first half of FY 2008-09 is 2450 MW and the peak demand is expected to increase during the summer months by around 250 MW. Thus, the peak demand requirement will be around 2800 MW. It has further submitted that considering a margin of 10% to maintain adequate support in the system to meet any eventuality, the total demand required would be about 3100 MW. CSPDCL's proposal to meet the total demand requirement from various sources is given in following table:

Table 5.19

Sourcing of Demand (MW)

Source	Capacity (MW)
CSPGCL	1925
CGS Firm Allocation	627
CGS Unallocated	112
IPPs	174
CPPs	207.5
Biomass	114
Total	**3159.5**

CSPDCL submitted that the capacity projected is required to meet the peak demand requirement. It has further been submitted that all the energy transactions undertaken during non-peak period would be concluded at zero cost to its retail consumers and the surplus energy would be sold to the trading company of erstwhile CSEB.

Commission's views

During the technical validation sessions, on the Commission's query, CSPDCL has submitted the month-wise peak demand for FY 2007-08 and FY 2008-09 and the monthly representative load curve from July 2007 to December 2008. Based on peak demand and load curves data submitted by CSPDCL, the Commission has observed that the peak demand of CSPDCL during the months of February 2009 and March 2009 have already reached 2723 MW and 2756 MW respectively. The report on 17th Electric Power Survey (EPS) issued by CEA has assesed peak load for 2009-10 as 3012 MW. From the load curves submitted by CSPDCL, the Commission has also observed that there is wide variation in peak demand on seasonal basis. However, CSPDCL will have to make short term arrangements to meet the peak demand and seasonal variations. There will be surplus energy available during some of the months during off peak hours.

Based on long term purchase agreements, the total net capacity available to CSPDCL is around 2600 MW and in order to meet the peak demand of around 3000 MW, CSPDCL will have to make short term arrangements to meet the deficit demand. CSPDCL has already initiated efforts in this regard and is in process of finalising short term agreement for 150 MW with Jindal Power Limited.

Based on projected power and energy availability from various sources as discussed above, CSPDCL will be able to meet the peak demand, but due to seasonal variations in demand, the projected energy availability from various sources will result in surplus energy during off peak hours.

The Commission has further observed that CSPDCL in its Petition has not projected any unscheduled interchange of energy, While there will be some UI transactions which will take place.

Based on the approved energy availability from CSPGCL generating stations and various sources of power purchase and projected category-wise sales and approved losses, CSPDCL may have additional power available during non-peak hours typically during day-time. Based on the projected availability and energy requirement of CSPDCL, the total surplus energy estimated by the Commission works out to 2430 MU as against 839 MU estimated by CSPDCL, mainly during off-peak hours. This surplus is bound to be there if the peak demand is to be fully met.

5.4.5.7 Total Power Purchase Expenses

The summary of the total quantum of power purchase and power purchase cost as projected by CSPDCL and approved by Commission for FY 2009-10 is given below:

Table 5.20

Summary of Power Purchase Expenses for FY 2009-10

Station	Quantum (MU)		Total Cost (Rs Crore)		Average Rate (Rs/kWh)	
	CSPDCL	Approved	CSPDCL	Approved	CSPDCL	Approved
CSPGCL	11739	12073	2019	1744	1.72	1.44
CGS	4583	4681	869	904	1.90	1.93
IPPs	1555	1522	392	384	2.52	2.52
CPPs	599	995	135	223	2.26	2.24
Biomass	614	614	168	168	2.74	2.74
Total	19091	19885	3584	3423	1.88	1.72

5.4.5.8 Treatment of Surplus Energy

CSPDCL has adjusted revenue from sale of surplus energy in determining the aggregate revenue requirement and also to project the average cost of supply. The Commission is of the opinion that the revenue from sale of surplus energy is incidental in nature and hence it is essential to segregate the cost of projected total energy availability in two parts i.e., energy input required by CSPDCL and the surplus energy likely to be available in order to arrive at average cost of supply for meeting the State power requirement. Out of total power purchase cost of Rs 3423 Crore, the Commission has estimated the total cost of power purchase of Rs 2834 Crore to meet the total energy requirement of 17455 MU. The power purchase cost of 2430 MU surplus energy is estimated at 589 Crore.

The Commission has made a conservative assessment of this additional energy available and has assumed it to be sold to the grid either through the UI under-drawal mechanism or through bilateral contracts, as such extra power availability will depend on system conditions. The cost of short term power purchase, as approved by the Commission vide its order dated April 18, 2009 (in suo motu petition no. 9 of 2009(M)), is in range of Rs 2.95/kWh to Rs 3.10/kWh with average of Rs 3.025/kWh. For under-drawal/sale of surplus energy, the Commission has assumed a rate of Rs. 3 per kWh, considering the revision in UI rates approved by CERC and the average short term power purchase rates approved by the Commission.

CSPDCL should however, endeavour to maximise the revenue through sale of such additional energy, to the extent actually available, in order to pass on the benefit to its consumers, through reduction in tariff. The sale of additional energy, if any, through the UI under-drawal route or otherwise, should not be at the cost of undertaking load shedding for any consumer category, as the primary responsibility of the CSPDCL is to ensure continuous supply of quality power for 24 hours every day to its consumers. The summary of the quantum and cost of under-drawal/sale of surplus power as projected by CSPDCL and approved by Commission is given below:

Table 5.21
Adjustment of Surplus Energy for FY 2009-10
Under-drawal/Sale of Surplus Power in FY 2009-10

	Petition			Approved		
Particulars	**Quantum**	**Total Cost**	**Average Rate**	**Quantum**	**Total Cost**	**Average Rate**
	MU	**Rs crore**	**Rs/Unit**	**MU**	**Rs crore**	**Rs/Unit**
UI-Under Drawal/Sale of Surplus power	839	247.31	2.95	2430	729	3.00

5.4.5.9 Regulation of purchase of power

The provison under Section 62(1)(a) of the Electricity Act, 2003, and also clause 9(1) of Guidelines for power purchase and power procurement process, 2005, issued by the Commission provides that for short-term power purchase, the Commission shall specify a price band for cost of power for the forthcoming year for different periods of the day, i.e., for peak, off- peak and normal hours.

The Commission has passed an order in suo motu petition no. 9of 2009(M) on April 18, 2009 in the matter of pricing of power required to be purchased in the short-term from captive generating plants and IPPs for FY 2009-10 by CSPDCL in the State. The Commission in this Order has approved the base rate of Rs. 2.95/kWh for power supply at 80% and above load factor of the contracted power with incentive of 5% of the agreed base rate for power supply during peak hours.

Accordingly, the maximum ceiling price for purchase of short term power from CPPs and IPPs for FY 2009-10 would be Rs 2.95/kWh plus incentive for peak hours.

The Commission directs CSPDCL to ensure that the rate of short-term energy during FY 2009-10 should not be higher than the maximum ceiling rate as approved by the Commission without the specific approval of the Commission. In exceptional circumstances, the Commission may consider the higher rate of energy purchase.

5.4.5.10 Merit order for purchase

For purchase of power at reasonable rates, it is necessary to adopt the merit order of purchase. The merit order of purchase is stipulated based on the variable cost of power purchase per unit, from individual sources. However, the energy to be purchased from biomass based non-conventional energy plants is to be excluded as the CSPDCL is required to purchase power, as per the order of the Commission, to the tune of 5% of its requirement from these sources. Also, the power purchase from Nuclear Power Corporation (NPC) needs to be excluded from the merit order, as the NPC stations cannot be backed down, and the energy has to be absorbed when it is generated. The details of power purchase by CSPDCL from different sources are discussed above. CSPDCL should optimize the power purchase cost by adopting the merit order dispatch principles.

5.4.6 Operation and Maintenance (O&M) Expenses

The operation and maintenance (O&M) expenses are generally considered under the following heads:

- Employee expenses
- Repairs & Maintenance Expenses
- Administration & General Expenses

5.4.6.1 Employee Expenses

CSPDCL has submitted actual employee expenses for CSEB as a whole for FY 2007-08 and apportioned among the three functions, based on the number of employees in each of them.

Table 5.22

Employee Expenses of erstwhile CSEB for FY 2007-08 (Rs. Crore)

S. No	Particulars	FY 2007-08	
		Approved	Actual
1	Salaries	170.08	169.63
2	Overtime	-	13.66
3	Dearness Allowance (DA)	99.90	93.97
4	Other Allowances	24.07	30.90
5	Bonus/ Exgratia	-	8.48
6	Productive incentive	-	2.29
7	Additional Pay	86.07	82.92
8	Interim Relief/wage revision	27.08	93.83
9	Medical Expenses Reimbursement	45.91	2.17
10	Leave Travel Assistance		1.83
12	Earned Leave Encashment		5.97
14	Payment under Workmen's Compensation Act		0.42
17	Supply of Free Electricity to Employees		0.93
18	Other Allowances and benefits		-
19	Staff Welfare Expenses	-	6.82
20	Terminal benefits	172.14	190.69
	TOTAL	**625.25**	**704.51**

Table 5.23

Allocation of Employee Expenses (Rs. Crore)

Function	FY 2007-08		Proportion of Employees FY 2007-08	
	Approved	Acutal	Approved	Provisional
Generation	166.07	217.39	26.56%	27.47%
Transmission	51.15	54.79	8.18%	10.58%
Distribution	408.04	432.33	65.26%	61.95%
Total	**625.26**	**704.51**	**100.00%**	**100.00%**

CSPDCL has projected employee expenses for the FY 2008-09 and FY 2009-10 based on the following assumptions:

- Increase in salary for FY 2008-09 considered as 18% (on account of VI pay revision) plus 6% normal increase and for FY 2009-10 as 6% (nominal percentage increase).
- Escalation of 8% in overtime allowance.
- Dearness Allowance (DA) rate considered as 54% and 66% for the FY 2008-09 and FY 2009-10 respectively as per Government orders.
- Increase of 23% and 6% considered in other cost for FY 2008-09 and FY 2009-10 respectively on account of 6th Pay Commission.
- Additional pay @ 50%of basic salary.

- Escalation of 6% and 8% on other employee expenses.
- Escalation of 6% on Employer's contribution towards leave encashment.
- Contribution of Rs 394 Crore in FY 2008-09 and Rs 300 Crore in FY 2009-10 towards terminal benefit fund for all three companies, the amount considered in the petition, however is Rs 394 Crore)

The total employee expenses projected for FY 2008-09 and FY 2009-10 is Rs. 570.01 Crore and Rs. 613.72 Crore, respectively as shown in the table below:

Table 5.24

Employee Expenses projected by CSPDCL (Rs. Crore)

Sl. No.	Particulars	FY 2008-09	FY 2009-10
		Petition	Petition
1	Basic Pay	130.53	138.36
2	Additional Pay	65.26	69.18
3	Dearness Allowances	105.24	136.98
4	Interim Relief	0.00	0.00
5	Other Allowances	30.61	32.33
6	Other Allowances and Benefits	12.54	13.45
7	Contribution to Gratuity and Pension Fund	257.43	257.43
	Total	**601.60**	**647.73**
	Less: Capitalization	-31.59	-34.01
	Total	**570.01**	**613.72**

The major reasons for increase in the employee expenditure are due to wage revision, increase in DA rates and increase in contribution to the Pension funds. CSPDCL has submitted that the wage revision is necessary to keep the employees motivated and pay them at par with the industry.

Commission's views

The major reason for increase in employee expenses for FY 2007-08 is due to wage revision. In the absence of division of employees in the transfer scheme, the Commission has considered the allocation of employee expenses as submitted in the petitions. The Commission has projected the employee expenses for FY 2009-10 on the basis of FY 2007-08 expenses with the following assumptions:

- Basic Pay: CSPDCL has not submitted any basis for 18% increase in basic pay towards pay revision. The pay revision was made effective from October 2007 and hence the actual employee expenses for FY 2007-08 factors in the pay revision for half of the year. Accordingly, the Commission has estimated the impact of pay revision by considering 9% increase on actual basic salary for FY 2007-08. Further, the Commission has considered the normal increase of 4% based on past trends, thus the total increase in basic pay for FY 2008-09 considered by the Commission is 13% on provisional basis subject to truing up. For FY 2009-10, the Commission has considered a normal increase of 4%.

- Overtime increase is limited to 4%, i.e. increase approved for basic salaries.
- Average DA rate 68% considered by the Commission for FY 2009-10 considering the prevalent DA rate.
- Increase in other costs at 13% for FY 2008-09 and 4% for FY 2009-10 i.e. increase approved for basic salaries.
- Additional pay @ 50%of basic salary.
- Increase in other employee expenses at 4%.
- For Pension Fund, CSPDCL has submitted that if the contribution made in an accounting period is less than that determined as per actuarial valuation, it is necessary to provide for the shortfall. The liability towards pension and gratuity fund increases from year to year due to increase in salary structure, increase in length of service of the employees, increase in number of employees and increase in the age of retirement. Maximum ceiling of the gratuity amount has been revised upward from Rs. 3.5 lacs to Rs. 10 lacs by the Chhattisgarh State Power Holding Corporation Limited (CSPHCL). Further, the retirement age has also been increased from 58 years to 60 years which is likely to increase the liability towards pension and gratuity.

The Commission had directed the Board in the tariff order for FY 2007-08 to ensure that the amounts are contributed to the fund as booked in the accounts during the year, and invested appropriately, so that the funds can be self-generating and no provisioning is required after sometime. The Commission has directed CSEB in the tariff order for the FY 2007-08 to provide the details to the Commission regarding the size of the fund and the investment made out of the fund. All the details regarding the size of the fund and investments made have not been submitted by the Compsnies. The Commission has obtained a copy of Actuarial Valuation Report and the total fund requirement towards terminal benefits as on March 2008 is Rs 2735 crore for all three functions of generation, transmission and distribution. The total contribution made to fund till FY 2007-08 is Rs 1640 Crore. The three (CSPGCL, CSPTCL and CSPDCL(projected the total pension and gratuity expenses of Rs. 390.69 crore for FY 2009-10 which includes Rs. 300 crore towards lump-sum contribution to the fund and balance Rs. 90.69 crore towards payment of annual outgo during FY 2009-10. The Commission has considered the lump-sum contribution to the fund of Rs. 300 crore as proposed by the three companies. In accordance with the principles adopted by the Commission in the tariff order for FY 2007-08, the Commission has not separatley considered the annual outgo during FY 2009-

10. The Commission would like to clarify that as the contribution towards pension fund is allowed in ARR, the companies should meet the annual outgo of terminal benefits out of contribution made to the fund and interest earned from the deposits made in the fund. There is thus no need to separately allow any annual outgo towards terminal benefits. While the Commission has agreed to contribution to the fund to the extent of Rs 300 Crore, during FY 2009-10, it has noted that serious issues have been raised about both the size of the fund as well as its management in the public hearings. The Commisison is issuing directive on this matter separately in this order in Section 8.

The Commission has approved gross the employee expenditure Rs. 547.60 Crore for FY 2009-10 as against Rs. 647.73 Crore projected by CSPDCL, as given in the table below:

Table 5.25

Employee Expenses for CSPDCL (Rs. Crore)

Sl No.	FY 2009-10	
	Petition	Approved
Basic Pay	138.36	122.64
Additional Pay	69.18	61.32
Dearness Allowances	136.98	125.09
Interim Relief	0.00	0.00
Other Allowances	32.33	28.24
Other Allowances and Benefits	13.45	12.64
Contribution to Gratuity and Pension Fund	257.43	197.67
Total	**647.73**	**547.60**

5.4.6.2 Administration & General (A&G) Expenses

The A&G expenses comprise rent, rates and taxes, travel and conveyance expenses, consultancy and legal fees, insurance and other administration expenses. CSPDCL has submitted actual A&G expenses for CSEB as a whole for FY 2007-08 and apportioned among the three functions based on the function for which these have been incurred. The common expenses have been allocated amongst the three functions based on their net fixed assets. The ratio for this division is 66.23%, 14.18% and 19.59% for Generation, Transmission and Distribution respectively.

Table 5.26

A&G Expenses of erstwhile CSEB for FY 2007-08 (Rs. Crore)

S. No	Particulars	FY 2007-08	
		Approved	Actual
1	Rent, Rates & Taxes	10.34	11.93
2	Insurance	0.00	14.37
3	Revenue Stamp Expenses Account	0.02	0.01
4	Telephone Charges, Postage, Telegram and Telex charges	2.61	2.62
5	Professional Charges		
	(i) Legal Charges	2.08	1.64
	(ii) Audit Fees	0.94	0.22
	(iii) Consultancy Charges	6.96	3.18
	(iv) Technical Fees	1.72	0.98
	(v) Other Professional Charges	0.55	0.99
6	Conveyance & Travel Expenses	12.23	11.83
7	Other Expenses		
	(A) Fees & Subscription	14.45	1.02
	(B) Books & Periodicals		0.20
	© Printing & Stationary		2.87
	(D) Advertisement		4.92
	(E) Contribution		5.41
	(F) Electricity Charges (Offices)		0.99
	(G) Water Charges		0.30
	(I) Entertainment		0.30
	(J) Miscellaneous Expenses		8.57
8	Freight	0	0.01
9	Other Purchase related expenses	8.82	-6.17
	TOTAL	**60.72**	**66.06**

Table 5.27

Allocation of A&G Expenses (Rs. Crore)

Function	FY 2007-08	
	Approved	Actual
Generation	26.35	20.40
Transmission	13.58	19.18
Distribution	20.80	26.48
Total	**60.73**	**66.06**

CSPDCL has projected gross A&G expenses of Rs. 34.35 Crore and Rs. 36.75 Crore for FY 2008-09 and FY 2009-10 respectively, by adopting methodology as given in Central Electricity Regulatory Commission (CERC) Discussion Paper on CERC Terms and Conditions of Tariff Regulations, dated June 2003. The average A&G expenses for FY 2006-07 have been computed by taking the average of three years actual A&G

expenses viz., FY 2005-06, FY 2006-07 and FY 2007-08 of erstwhile CSEB. This average A&G expense of FY 2006-07 is then increased by the inflation factor @ 9% over a two year period to arrive at the projected expenses for FY 2008-09. The expenses for FY 2008-09 have been trifurcated into three functions of erstwhile CSEB as per the percentages approved by the Commission in its tariff order for FY 2007-08. Norms arrived from base year figures for A&G expenses is 7% increase over previous year. On the basis of norms, CSPDCL has projected the A&G expenses for FY 2009-10. The head-wise A&G expenditure projected by CSPDCL for FY 2008-09 and FY 2009-10 is given in the table below:

Table 5.28

Allocation of A&G Expenses (Rs. Crore)

Particulars	**FY2008-09 (Petition)**	**FY2009-10 (Petition)**
Rent rates and taxes	3.19	3.41
Administration Expenses		
Insurance	7.48	8
Revenue Stamp Expenses Account	0	0
Telephone, Postage, Telegram & Telex Charges	1.41	1.5
Incentive & Award To Employees/Outsiders	0.06	0.06
Consultancy Charges	0.76	0.82
Technical Fees	0.33	0.36
Other Professional Charges	0.73	0.78
Conveyance And Travel	2.04	2.18
License And Registration Fee	0.01	0.01
Vehicle Expenses (Other Than Trucks And Delivery Vans)	4.12	4.41
Other charges	7.26	8.72
Legal Charges	0.62	0.67
Auditor'S Fee	0.05	0.06
Material related expenses	6.28	5.77
Total A & G Charges	**34.35**	**36.75**
A&G expenses capitalized	-2.16	-2.32
Net A&G expenses	**32.18**	**34.43**

Commission's views

The Commission has observed that the major reason for increase in A&G expenses for FY 2007-08 was insurance expenses. In the absence of transfer scheme, the Commission has considered the allocation of A&G expenses for FY 2007-08 as submitted by the companies in the petition. The Commission has projected the employee expenses for FY 2009-10 considering the FY 2007-08 expenses as base, and based on the following assumptions.

The Commission is of the view that, CSPDCL has selectively adopted the approach based on CERC discussion paper of 2003. The new CERC Tariff Regulations of 2009 for the period FY 2009-10 to FY 2013-14 has since been notified which specifies the norms for overall O&M expenses and not component wise norms. The norms of entire O&M expenses for CSPDCL need to be framed during MYT order after finalisation of the Transfer Scheme.

For FY 2008-09 and FY 2009-10, the Commission has considered an increase of 6.04% on account of inflation over the actual A&G expenses for FY 2007-08, based on the increase in Wholesale Price Index (WPI) and Consumer Price Index (CPI). The Commission has considered the point to point inflation over WPI numbers (as per Office of Economic Advisor of Govt. of India) and CPI numbers for Industrial Workers (as per Labour Bureau, Government of India) for a period of 3 years, i.e., FY 2006-07 to FY 2008-09 (upto December 2008), to smoothen the inflation curve. The Commission has considered a weight of 60% to WPI and 40% to CPI, based on the expected relationship with the cost drivers. **Based on these assumptions, the A&G expenses approved by the Commission for FY 2009-10 are given in table below:**

Table 5.29

A&G Expenses for CSPDCL (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
A&G Expenses	36.75	29.82

5.4.6.3 Repair and Maintenance (R&M) expenses

CSPDCL has submitted actual R&M expenses for CSEB as a whole for FY 2007-08 and apportioned among the three functions based on the R&M expenses allocated to the particular functions for which these have been incurred. The common expenses have been allocated amongst the three functions based on their fixed assets. The ratio for this division is 75.11%, 5.97% and 18.92% for Generation, Transmission and Distribution respectively.

Table 5.30

R&M Expenses of erstwhile CSEB for FY 2007-08 (Rs. Crore)

S. No	Particulars	FY 2007-08	
		Approved	Actual
1	Plant and Machinery	-	136.66
2	Building		13.96
3	Civil Works		7.84
4	Hydraulic Works		1.53

S. No	Particulars	FY 2007-08	
		Approved	Actual
5	Lines, Cables Net Works etc.		16.93
6	Vehicles		3.19
7	Furniture and Fixtures		0.06
8	Office Equipments		1.13
9	Station Supplies		0.00
10	Other Credits to R&M Charges		-2.14
	Total	**142.4**	**179.15**

Table 5.31

Allocation of R&M Expenses (Rs. Crore)

Function	R&M Expenses		GFA	
	FY 2007-08		FY 2007-08	
	Approved	Actual	Approved	Actual
Generation	66.05	134.56	1321.00	1328.50
Transmission	24.70	10.69	494.00	530.39
Distribution	51.65	33.90	1033.00	1007.66
Total	**142.40**	**179.15**	**2848.00**	**2866.55**

CSPDCL has projected gross R&M expenditure of Rs. 67.33 Crore and Rs. 91.91 Crore for FY 2008-09 and FY 2009-10 respectively. The R&M expenses for FY 2008-09 have been estimated as 5% of the opening GFA. The head-wise R&M expenditure projected by CSPDCL for FY 2008-09 and FY 2009-10 is given in the table below:

Table 5.32

Table: R&M Expenses (Rs. Crore)

Particulars	FY 2008-09	FY 2009-10
	Petition	Petition
Plant and Machinery	32.95	44.98
Building	7.27	9.93
Civil Works	1.62	2.21
Hydraulic Works	0.00	0.00
Lines, Cables Net Works etc.	25.90	35.35
Vehicles	1.39	1.90
Furniture and Fixtures	0.04	0.06
Office Equipments	0.52	0.70
Station Supplies	0.00	0.00
OtherCredits to R&M Charges	-2.36	-3.22
Issue from stores	-	-
Total	**67.33**	**91.91**
Capitalisation	-1.78	-2.43
Net R&M Expenses	**65.55**	**89.48**

Commission's views

The Commission in its previous orders has approved R&M Expenses as 5% of opening GFA. The Commission will specify O&M norms for CSPDCL in the MYT order after finalization of Transfer Scheme. For FY 2009-10, the Commission has considered R&M Expenses @ 5% of opening GFA only as approved earlier.

Table 5.33

Gross R&M Expense (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
R&M Expenses	91.91	91.91

5.4.7 Capital Investment Plan for FY 2008-09 and FY 2009-10

CSPDCL submitted that they are planning major investments to augment the plants and network to meet the current demands at normative parameters as well as to meet the future growth in demand. The key features of the planned investments from FY 2008-09 are as follows

- More 33 kV and 11 kV lines to bring down LT/HT line ratio.
- More 33 kV substations to improve voltage levels and extend reach areas.
- DTR metering and Consumer indexing to support energy audit.
- Line works for pump energisation.
- Rural Electrification works both under RGGVY scheme and RE works program.
- Technological up-gradations under the Restructured APDRP programme and EITC programme.

The table below provides the details of the capital investment proposed by CSPDCL for FY 2008-09 and 2009-10:

Table 5.34

Capital Investment Plan (Rs. Crore)

Name	Funding	2008-09			2009-10		
		Equity	Loan	Grant	Equity	Loan	Grant
RGGVY	100% Grant	-	-	260	-	-	760
APDRP	100% Grant after 2008-09	62	-	-	-	-	125.5
Atal Jyoti	70-30 D/E Ratio	22.5	52.5	75	45	105	50

Name	Funding	2008-09			2009-10		
		Equity	Loan	Grant	Equity	Loan	Grant
RE works (other than RGGVY including Pump)	Fixed grant, rest equity	175	-	25	100	-	50
Sub Transmission & Normal development Works (ST & ND)	Fixed grant, rest equity	175	-	66	180	-	70
Distribution Loss Reduction	70-30 D/E Ratio	14.85	34.65	-	45.3	105.7	-
Energy Infotech Centre (EITC)	70-30 D/E Ratio	9.3	21.7	-	7.2	16.8	-
Total		**458.65**	**108.85**	**426**	**377.5**	**227.5**	**1055.5**
Capitalisation		**397.25**			**597.64**		

The total capital investment proposed by CSPDCL for FY 2008-09 and FY 2009-10 is Rs. 993.5 Crore and 1660.5 Crore respectively, as detailed in table above. During the technical validation session the Commission has enquired about the preparedness and the capacity of the company to execute the proposed capital projects (scheme wise) in FY 2009-10. CSPDCL, in reply, has stated that the State Govt. has not made any provision for Atal Jyoti Yojna in the budget for the FY 2009-10 and hence equivalent quantum of work of Rs. 50 Crore will be reduced in FY 2009-10. The works corresponding to 70% of the expenditure in a particular year would be capitalised while the rest would be capitalised in the succeeding year. Thus the amount capitalised would be 397.25 Crore and 597.64 Crore for FY 2008-09 and FY 2009-10 respectively.

Commission's views

The CSPDCL's capital expenditure plans, funding for the same, preparedness for undertaking the same, orders placed, etc., were discussed with the CSPDCL's officers, to assess whether the high level of capital expenditure envisaged by the company for FY 2008-09 and FY 2009-10 could be undertaken, and whether the required funds have been tied up.

The details of various projects and preparedness submitted by CSPDCL are as follows:

- **APDRP:**
  - ✓ Tender floated under part A of R-APDRP scheme for appointment of IT consultant
  - ✓ Proposed expenditure for FY 2009-10 is Rs. 125 cr. (Full Grant from FY 2009-10 onwards)

- **Atal Jyoti Yojna:**
  - ✓ Amount of Rs. 125 Crore received from State Government out of which Rs. 75 cr. is likely to be spent by FY 2008-09 and balance will be available for FY 2009-10.
  - ✓ Unavailability of funds under this scheme for the FY 2009-10 due to constraints being admitted by State Government.
  - ✓ CSPDCL plans to implement the scheme by arranging an equity of Rs. 45 Crore and loan of Rs. 105 cr.
- **RE Works (other than RGGVY):**
  - ✓ Works of electrification of village and Majra sanctioned during preceding year but pending for execution are included in this scheme.
  - ✓ No provision made by Government for providing grant under this scheme.
- **RGGVY scheme:**
  - ✓ Total expenditure proposed is Rs. 760 Crore comprising of Rs. 684 cr. grant from Central Government and Rs. 76 Crore grant from State govt.
  - ✓ Scheme of 13 districts have been sanctioned out of which an expenditure of Rs. 200 cr. is likely to be incurred by end of FY 2008-09.

- **ST & ND:**
  - ✓ Works under this scheme include extension of 33 kV, 11 kV and LT lines, installation commentaries of 33/11 kV and 11/0.4 kV S/s, release of service connections and other wise works.
  - ✓ No provision made by State budget for the FY 2009-10.
  - ✓ Amount of Rs. 150 Crore through equity and 50 Crore through loan from REC to be arranged.
- **T&D loss reduction:**
  - ✓ Funds for these schemes to be arranged through equity and loan.
  - ✓ Preparation of scheme to get the loan sanction from REC.

Funding of the entire capital expenditure for RGGVY scheme for FY 2008-09 and FY 2009-10 is through grants from the State and Central Governments. Therefore the Commission has accepted the capital expenditure as projected by CSPDCL for this scheme. As regards to capital expenditure under ST & ND and for distribution loss reduction, the Commission is of the view that the expenditure proposed by CSPDCL is on a higher side, considering the actual capital expenditure incurred in previous years. On the basis of the actual expenditure incurred till December 2008 in FY 2008-09, the Commission has considered 70% and 50% of the works proposed by CSPDCL for the FY 2008-09 and FY 2009-10 respectively. However, the capital investments towards EITC has been considered as projected by CSPDCL.

Table 5.35

Capital Expenditure and Capitalization in FY 2008-09 and FY 2009-10 (Rs. Crore)

Project	FY 2008-09 (Petition)	FY 2008-09 Actual Till Dec-08	FY 2008-09 Commission	Petition (FY 2009-10)	Commission FY 2009-10
RGGVY	260.00	116.12	260.00	760.00	760.00
APDRP	62.00	69.72	62.00	125.50	125.50
Atal Jyoti	150.00	50.65	75.00	200.00	150.00
RE works (other than RGGVY including Pump)	200.00	230.88	250.00	150.00	150.00
ST & ND	241.00	192.04	241.00	250.00	250.00
T&D Loss Reduction	49.50	47.01	49.50	151.00	75.50
EITC	31.00	8.00	31.00	24.00	24.00
Total	**993.50**	**714.42**	**968.50**	**1660.50**	**1535.00**
Ca;pitalisation			**677.95**		**1365.05**

In FY 2008-09, the Commission has considered 70% of the Capital Expenditure incurred in FY 2008-09 gets capitalised in that particular year and rest 30% of the capital expenditure gets capitalised in the subsequent FY 2009-10 along with 70% of the capital expenditure provided for FY 2009-10 gets capitalised in the same FY 2009-10.

The total capital investment considered by the Commission for FY 2008-09 and FY 2009-10 is Rs. 968.50 Crore and 1535 Crore respectively, as detailed in table above. The Commission would like to emphasize that though the Commission has considered the capital expenditure towards other ST, ND and distribution loss reduction as discussed above, for the purpose of estimation of ARR and determination of tariff, the same should not be considered as approval of capital expenditure by the Commission. The Commission directs CSPDCL to submit the scheme-wise details of the capital expenditure for each estimate above Rs 5 Crore for the approval of the Commission. **The Commission directs that implementation of capital estimate above Rs. 5 crore should not be undertaken without the specific approval of the Commission.**

5.4.8 Interest and Finance charges

CSPDCL has submitted that the loans that could be identified with a particular functional wing of G, T or D of erstwhile CSEB has been allocated to the respective functional company. However, the remaining loans have been trifurcated based on the GFA across the three functional companies.

Till the end of FY 2007-08, the interest obligations arising to the erstwhile CSEB were on account of the following loans:

i) Loans from the State Government

ii) SLR and PP bonds

v) Loan for APDRP scheme

vi) Loans from Commercial bank – SPA

vii) Loans from various other sources

The interest and finance charges have been allocated to generation, transmission and distribution functions as shown in the table below:

Table 5.36

Interest and Finance Charges in FY 2007-08 (Rs. Crore)

Sr No.	Loan Details	Actual		
		Generation	Transmission	Distribution
1	Government Loans	49.97	10.7	14.78
2	Public Bonds	12.81	2.74	3.79
3	Debentures	10.21	2.17	2.99
4	LIC Loans	0	0	0
5	REC Loans	94.65	0	0
6	Loans From Commercial Bank – SPA	0	0	0.35
7	Loans from CSS for Renovation	0	0	7.68
8	Loans from PFC	16.11	3.45	0
9	Other Sources	11.52	2.47	3.41
10	Financing Charges	0.75	0.75	1.03
	Total	**196.02**	**22.28**	**34.03**

CSPDCL has projected interest and finance charges for FY 2009-10 as Rs. 58.62 Crore. The break-up of the interest and financing charges is as given in the table below:

Table 5.37

Projection of interest and finance charges for FY 2009-10 (Rs. Crore)

Particular	FY 2009-10 (Petition)
State Government Loans	7.37
Bonds	11.73
Debentures	3.71
ARDC Loans	7.21
Interest on loan from Western coal fields	3.15
Interest on New Loans taken in FY 2008-09	24.48
Cost of raising finance & Bank Charges on project loans	1.17
Grand Total Of Interest & Finance Charges	**58.62**
Less: Interest & Finance Charges Chargeable to Capital Account	8.13
Net Total Of Interest & Finance Charges on Project Loans (D –E)	**50.69**
Interest on Consumer Security Deposit	0.35
Total interest and finance charges chargeable to revenue account	**51.03**

Commission's views

During the technical validation session, the Commission had directed CSPDCL to identify loans as per FY 2007-08 provisional accounts of CSEB for Generation, Transmission and Distribution functions and apportionment of common loans alongwith basis of apportionment.

In reply, CSPDCL submitted the details of loan for each company as follows:

Table 5.38

Allocation of loans of erstwhile CSEB

Particulars	Total loan as on March 31, 2008	Allocation of Loans		
		CSPGCL	CSPTCL	CSPDCL
State Government Loan	908.16	557.42	126.04	224.67
Public Bonds (guaranteed by State Government)	213.2	130.86	29.59	52.74
RE Debentures	82.57	50.68	11.46	20.42
Loan received under CSS for modernisation and renovation & APDRP scheme	87.86			87.86
Loan from PFC, New Delhi	235.83		235.83	
Loan from REC	1354.42	1354.42		
Others	4.62	2.82	0.63	1.15
Total	**2886.66**	**2096.20**	**403.55**	**386.84**

In the absence of allocation of assets and liabilities among the successor companies of CSEB, the Commission has considered the reconciliation of the opening balance of loan as submitted by the CSPDCL for projecting the interest on existing loans.

The new loans have been considered based on the capital expenditure provisionally approved by the Commission for estimation of ARR. The funding considered by the Commission for various capital expenditure schemes is as follows:

- RGGVY – The Commission has considered 100% grant for the expenditure under this scheme as proposed by CSPDCL for FY 2008-09 and FY 2009-10.
- APDRP – The Commission has considered debt/equity ratio of 70:30 for the expenditure under this scheme for FY 2008-09, however CSPDCL has proposed expenditure through equity for FY 2008-09. For FY 2009-10, the Commission has considered 100% grant for the expenditure under this scheme as proposed by CSPDCL for FY 2009-10.
- Atal Jyoti - The Commission has considered the amount of grant to be received and the balance expenditure through debt/equity ratio of 70:30 for FY 2008-09 and debt/equity ratio of 70:30 for FY 2009-10 as proposed by CSPDCL.

- RE Works- The Commission has considered the amount of grant to be received and balance through debt/equity ratio of 70:30 for FY 2008-09 and FY 2009-10, however CSPDCL has proposed the balance expenditure through equity.
- ST & ND- The Commission has considered the amount of grant to be received and the balance expenditure through debt/equity ratio of 70:30 for FY 2008-09 and FY 2009-10, however CSPDCL has proposed the balance expenditure through equity.
- T&D Loss Reduction- The Commission has considered debt/equity ratio of 70:30 for the expenditure under this scheme for FY 2008-09 and FY 2009-10 as proposed by CSPDCL.
- EITC- The Commission has considered debt/equity ratio of 70:30 for the expenditure under this scheme for FY 2008-09 and FY 2009-10 as proposed by CSPDCL.

Table 5.39

Means of Finance for FY 2008-09 and FY 2009-10 (Rs. Crore)

Particulars	2008-09			2009-10		
	Equity	Loan	Grant	Equity	Loan	Grant
RGGVY			260.00			760.00
APDRP	18.60	43.40				125.50
Atal Jyoti	11.25	26.25	37.50	45.00	105.00	
RE works (other than RGGVY including Pump)	67.50	157.50	25.00	30.00	70.00	50.00
ST & ND	52.50	122.50	66.00	54.00	126.00	70.00
T&D Loss Reduction	14.85	34.65		22.65	52.85	
EITC	9.30	21.70		7.20	16.80	
Total	**174.00**	**406.00**	**388.50**	**158.85**	**370.65**	**1005.50**

Table 5.40

New Loans for FY 2008-09 and FY 2009-10 (Rs. Crore)

Particulars	FY 2008-09		FY 2009-10	
	Petition	Approved	Petition	Approved
RGGVY				
APDRP		43.4		0
Atal Jyoti	52.5	26.25	105	105
RE works (other than RGGVY including Pump)		157.50		70
ST & ND		122.50		126
T&D Loss Reduction	34.65	34.65	105.7	52.85
EITC	21.7	21.7	16.8	16.8
Total	**108.85**	**406.00**	**227.5**	**370.65**

An interest rate of 11% has been proposed by CSPDCL on the new loans to be taken during the year, for determining the interest expenditure in FY 2008-09 and FY 2009-10. In case of any variation in the interest rate vis-à-vis the approved interest rate, the same will be considered at the time of truing up of the interest expenditure, since interest cost is a pass-through expense. The Commission has considered interest on new loans for half of the year as the capital expenditure and loan disbursements during the year will be spread over across the year. Since the total security deposit outstanding is Rs. 421.87 crore, mere 0.35 crore of interest on security deposit for FY 2009-10 can not be allowed. Computing interest @ 6% on the outstanding deposit, Rs. 25.31 crore is approved as interest on security deposit. **The expenditure on interest and finance charges sought by CSPDCL and approved by the Commission are given in the table below:**

Table 5.41

Interest and Finance Charges for FY 2009-10 (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Interest on Existing Loans	33.16	33.16
Interest on Security Deposit	0.35	25.31
Financing charges	1.17	1.17
New Loan Amount	227.5	370.65
Interest on New Loan	24.48	65.0
Total Interest and Financing Charges	**59.16**	**124.69**

The interest on new loans as approved by the Commission is on the higher side as compared to interest proposed by CSPDCL, primarily due to the reason that the Commission has considered the normative debt/equity ratio of 70:30 for funding of capital expenditure towards ST & ND works as against funding proposed by CSPDCL from the internal accruals.

5.4.9 Capitalization of Interest and O&M expenses

The O&M expenses incurred towards addition of capital assets has to be capitalised and added to the asset value, and charged off through depreciation over the life of the asset. Similarly, the interest expenditure during the construction period (IDC) has to be capitalised and added to the asset value.

CSPDCL has projected a total capitalisation of Rs. 39.42 Crore and Rs. 46.89 Crore for FY 2008-09 and FY 2009-10 respectively, comprising interest capitalisation of Rs. 3.89 Crore and Rs. 8.13 Crore respectively, and the balance made up of capitalised O&M expenses.

Commission's views

The Commission has accepted the methodology used by CSPDCL to determine the level of capitalisation of O&M expenses and interest expenses. The amount of capitalisation projected by CSPDCL and the capitalisation approved by the Commission for FY 2008-09 and FY 2009-10 is given in the following table:

Table 5.42
Capitalisation of O&M and Interest Expenses (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
O&M Expenses Capitalised	38.76	32.96
Interest Capitalised	8.13	17.14

However, since the total O&M expenses as approved by the Commission are lower than CSPDCL's projections, the capitalised expenses approved by the Commission have been reduced accordingly.

5.4.10 Depreciation

CSPDCL has taken depreciation on the assets capitalized during the year on pro-rata basis for the days of operation in accordance with the Commission's Tariff Regulations. Due to this, the amount of depreciation on new assets added during the year is also chargeable. The depreciation claimed by the company for FY 2008-09 and FY 2009-10 are given in the table below:

Table 5.43
Depreciation projected by CSPDCL for FY 2008-09 and FY 2009-10 (Rs. Crore)

Particulars		FY 2008-09	FY 2009-10
GFA	Opening	1346.62	2264.31
	Addition	917.69	1686.53
	Closing	2264.31	3950.84
CWIP	Opening	888.95	968.65
	Addition	79.7	-17.9
	Closing	968.65	950.76
Consumer Contributions, grants etc	Opening	1232.45	1658.45
	Addition	426	1055.5
	Closing	1658.45	2713.95
Consumer contribution & Grants in CWIP	Opening	490.07	496.9
	Addition	6.83	29.52
	Closing	496.9	526.42
Consumer contribution in GFA	Opening	742.38	1161.55
	Addition	419.17	1025.98
	Closing	1161.55	2187.53
Depreciation	**on fixed assets**	**22.03**	**42.87**
	on consumer contribution	24.57	37.33
	Total	46.59	80.19

Commission's views

The Commission has examined the computations of depreciation submitted by CSPDCL. The Commission has considered addition to assets during FY 2008-09 and proposed in FY 2009-10 as per the capital expenditure and capitalisation as discussed in previous sections and has computed depreciation using straight line method and rate of depreciation as per regulations leading to the average depreciation rate as 2.58%. **The depreciation approved by the Commission for FY 2009-10 is given in the following table:**

Table 5.44

Depreciation for FY 2009-10 (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Opening GFA	2264.31	2315.12
Additions	1686.53	1535.00
Closing GFA	3950.84	3850.12
Accumulated Depn at beginning of year	585.29	585.94
Depreciation During the year	**80.19**	**79.55**
Accumulated Depn at end of year	665.48	665.49
Depn Rate	2.58%	2.58%
Accumulated Depn as % of GFA	26%	25%
Less Depn on Cons. Contribution and Grant	37.33	37.33
Net Depreciation	**42.87**	**42.22**

5.4.11 Reasonable Return

CSPDCL has submitted that the erstwhile CSEB was eligible for returns of 14% on the equity contribution for projects where equity is either less than or 30% of project cost and in case of projects where equity contribution is more than 30%, the balance equity contribution was eligible for a return of 10% being the cost of debt. In CSPDCL, the projects are funded through a mix of grant, equity and debt across various projects/ schemes. Based on the provisional account for FY 2007-08 and the principles adopted by the Commission in provision of reasonable return in the tariff order for FY 2007-08, the reasonable return of CSPDCL for FY 2007-08 is computed in two parts.

Table 5.45

Reasonable Return for FY 2007-08 for CSEB (Rs. Crore)

Particular	Amount (in Rs. Crore)
RoE as on 31 March 2005	156.59
Total RoE on Equity Capex	164.16
(less) RoE on CWIP	-143.61
ROE on works Capitalized in 2007-08	73.53
Total Reasonable Return for FY 2007-08 of erstwhile CSEB	**250.68**

This reasonable return of CSEB would be trifurcated across Generation, Transmission and Distribution wing of erstwhile CSEB in proportion to the GFA of the three wings. Thus the reasonable return of CSPDCL is Rs. 62.02 Crore for FY 2007-08 (24.74% of the total reasonable return).

CSPDCL has submitted the reasonable return computations for FY 2008-09 and FY 2009-10 as follows:

Table 5.46

Reasonable Return for FY 2008-09 and FY 2009-10 for CSPDCL (Rs. Crore)

Particulars	As on 31 March 2005	During the Period till March 2008	Total till March 2008	During the Period till March 2009	Total till March 2009
GFA	700.4	646.22	1346.62	1563.91	2264.31
CWIP	338.83	550.13	888.95	629.83	968.65
Sub Total	1039.22	1196.35	2235.57	2193.74	3232.96
Grant	442.28	790.17	1232.45	1216.17	1658.45
Capital Cost of Project	596.94	406.17	1003.12	977.56	1574.51
Debt	**231.99**	**13.47**	**245.46**	**125.04**	**357.03**
Equity	**364.95**	**392.7**	**757.66**	**852.52**	**1217.48**
Equity (%)	61.14%	96.68%	75.53%	87.21%	77.32%
RoE as on 31 March 2005	**52.23**		**52.23**		**52.23**
RoE on Normative Equity		17.06	17.06	51.27	51.27
RoE on Remaining Equity		29.79	29.79	61.52	61.52
Total RoE on Equity Capex			99.09		165.02
(less) RoE on CWIP			**39.401**		**49.44**
Reasonable Return			**59.69**		**115.58**

Table 5.47

Reasonable Return for Capitalization during FY 2008-09 and FY 2009-10 for CSPDCL (Rs. Crore)

Particulars	FY 2008-09	FY 2009-10
Equity Capitalization during the year	319.68	370.34
Total Capitalization	619.49	819.88
Share of Capitalization	51.60%	45.17%
Return on normative Equity capitalization	13.01	21.5
Return on remaining equity	7.36	6.84
Total Return for capitalization during the year	20.37	28.34

Thus the total reasonable return due to CSPDCL is Rs. 80.06 Crore for FY 2008-09. CSPDCL has calculated reasonable return on the basis of the new regulations of CERC, (Terms and conditions of tariff) Regulations, 2009 for the period FY 2009-10 to FY 2013-14. The new tariff regulations have provided for pre tax return on equity of 17.481% for both Generation and Transmission companies from FY 2009-10 onwards. CSPDCL has considered the Reasonable return of 17.481% for FY 2009-10 and thus the reasonable return for FY 2009-10 for CSPDCL is estimated at 143.91 Crore.

Commission's views

During the technical validation sessions, the Commission had directed the CSPDCL to submit the revised computation of reasonable return for FY 2007-08, FY 2008-09 and FY 2009-10 on account of the error on the allocation of capital liabilities and payment due on capital liabilities. CSPDCL has submitted the revised workings of reasonable return.

The Commission has computed the reasonable return for erstwhile CSEB on opening equity for FY 2008-09 in accordance with Capital Base methodology adopted in previous tariff orders since the Transfer Scheme and Opening Balance sheets have not finalized. The Commission has allocated the reasonable return on opening equity for FY 2008-09 amongst the three companies in proportion of Gross Fixed Assets. The detailed computations of reasonable return for FY 2007-08 are given below.

Table 5.48

RoE for CSEB as a whole on opening equity for FY 2008-09 (Rs. Crore)

S.No	Particulars	Up to 31.03.05	From 01.04.05 to 31.03.08	Total, as on 31.03.08
	Capital Expenditure			
1	GFA	1910.45	3532.57	5443.02
2	CWIP	1195.50	328.43	1523.93
	Sub-total	3105.95	3861.00	6966.95
3	Less: Consumer Contribution /Capital Grants	-441.04	-791.46	-1232.50
4	Capital Cost of Project	2664.91	3069.54	5734.45
	Means of Finance			
5	Debts	1546.40	1440.30	2986.70
6	Debt %	0.58	0.47	0.52
	Equity			
7	Equity Share capital	23.12	0.00	23.12
8	Reserves/Surplus	1024.67	1138.38	2163.05
9	Internal Accruals	1307.65	-133.03	1174.62
10	Net Worth	2355.44	1005.35	3360.79
11	Investments	998.53	-401.10	597.43

S.No	Particulars	Up to 31.03.05	From 01.04.05 to 31.03.08	Total, as on 31.03.08
12	Other Assets	1.46	7.36	8.82
13	Net Current Assets	236.95	-235.50	1.45
14	Net Equity invested in capex	1118.50	1634.59	2753.09
15	Equity%	42%	53%	48%
16	Return @14% on Rs. 1118.5 crore, on the total net equity invested in capex till 31.3.05	156.59		156.59
17	Return on equity employed in capex on or after 1.4.05 (Rs. 1634.59 crore) 1. @ 14% on Rs. 920.862 crore normative equity, i.e., 30% of capital cost of the project		128.92	128.92
18	8.5% on Rs. 713.73 crore (1634.59-920.68) equity employed in capex over and above the normative equity		60.67	60.67
19	Gross Total Return on Equity for FY 2007-08 on the basis of above total net equity invested in capital expenditure including CWIP	156.59	189.59	346.18
20	Less: out of the above gross total, Return on equity portion attributable to CWIP (346.8/6966) x 1523.93			92.00
21	Reasonable Return on equity allowable for FY 2007-08 for the whole CSEB on the net equity employed in capital expenditure excluding the portion attributable to CWIP			**254.18**

This reasonable return on opening equity for FY 2008-09 is trifurcated across Generation, Transmission and Distribution wing of erstwhile CSEB in proportion to the GFA of the three wings.

Table 5.49

Allocation of RoE for FY 2007-08 (Rs. Crore)

Particulars	Generation	Transmission	Distribution
Return on Opening Equity	156.00	35.30	62.89
GFA %	61.37%	13.89%	24.74%

As regards, CSPDCL's plea for the revised rate of returns of 17.481% in accordance with the CERC (Terms and Conditions of tariff) Regulations, 2009, the Commission is of the view that at this stage when the opening balance sheets of the companies are yet to be notified, it is not possible to assess the actual equity contribution by CSPTCL. The total equity share capital of erstwhile CSEB as on march 31, 2008 indicated in the provisional accounts is Rs only 23.12 Crore. The Commission in its previous orders have adopted the Capital Base approach for allowing the reasonable return to erstwhile CSEB. In the absence of opening equity share capital of three companies, the Commission in this order, would like to continue with the methodology (i.e. Capital Base approach for investments made till FY 2007-08) and principles (i.e. rate of 14%) adopted in previous orders for estimating the returns. The Commisison will take a view on higher rate of return on equity in accordance with CERC Regulations, referred to above during the next year's ARR and tariff determination process once the opening balance sheets of the companies are finalised and the information on equity share capital of three companies is avaiable. The Commission for FY 2009-10 has computed the return by considering the reasonable return allocated to CSPTCL for investments made till FY 2007-08 and by allowing the return on normative equity funding considered for capital expenditure during FY 2008-09 and FY 2009-10. **The reasonable return allowed by the Commission for FY 2009-10 is given in following Table:**

Table 5.50

Reasonable Return for FY 2009-10 for CSPDCL (Rs. Crore)

Particulars	Amount in Rs. Crore
RoE for investments till FY 2007-08	62.89
Return on Equity Investments during FY 2008-09 and FY 2009-10	35.48
Total Return	**98.37**

5.4.12 Provision for Taxes

CSPDCL has claimed Rs. 4.21 crore as provision for income tax for FY 2009-10.

Commission's views

Regulation 27 of the Commission's Tariff Regulations stipulate that income tax, if actually liable to be paid, shall be limited to tax on return on equity allowed, excluding incentives.

CSPDCL has considered the Income tax exemption and has sought the Commission's approval only for the Fringe Benefit Tax (FBT) of Rs. 4.21 crore payable by CSPDCL. Hence, the Commission approves the tax liability for CSPDCL as Rs. 4.21 crore for FY 2009-10.

5.4.13 Non-tariff Income

CSPDCL has projected non-tariff income Rs. 250.82 Crore for FY 2009-10. The income may be in the form of interest on fixed deposits apportioned to CSPDCL, other income like meter rent, miscellaneous charges, open access charges, parallel operation charges, etc. The Miscellaneous charges from consumers for FY 2009-10 is projected as Rs. 79.27 crore. The Commission vide order dated August 10, 2007 passed in petition 40/2006(M) has prescribed miscellaneous and general charges, shall be applicable during FY 2009-10 also till these are revised by the Commission. The non-tariff income of CSPDCL is given in the table below:

Table 5.51

Non-tariff income projected by CSPDCL (Rs. Crore)

S. No	Particulars	FY 2007-08		FY 2008-09	FY 2009-10
		Approved	Provisional	Estimated	Petition
A	**Income from Investment, Fixed & Call Deposits**				
1	Interest Income from Investments other than Contingency Reserve		0.50	0.55	0.60
2	Interest on fixed deposits		17.27	19.00	20.90
3	Interest from Banks other than Fixed Deposits		0.00	0.00	0.00
4	Interest on loan to govt		6.89	1.89	2.08
	Sub-Total		**24.66**	**21.44**	**23.59**
B	**Other Non Tariff Income**				
1	Interest on loans and Advances to staff		0.66	0.73	0.80
2	Interest on Loans and Advances to other Licensee		0.00	0.00	0.00
3	Interest on Loans and Advances to Lessors		0.00	0.00	0.00
4	Interest on Advances to Suppliers / Contractors		0.42	0.46	0.51
5	Income from Trading (other than Electricity)		54.44	25.33	27.86
6	Gain on Sale of Fixed Assets		0.00	0.00	0.00
7	Income/Fee/Collection against staff welfare activities		0.05	0.05	0.06
8	Miscellaneous receipts		28.44	31.28	34.41
9	Wheeling charges from Open access Consumers		0.00	0.00	0.00
10	Meter Rent		26.02	28.63	31.49
11	Recovery from theft of energy		0.04	0.05	0.05
12	Surcharge and Additional Surcharge		0.00	0.00	0.00
13	Incentive due to Securitisation of CPSU Dues		0.00	0.00	0.00
14	Misc. charges from consumers		65.51	72.07	79.27
15	Delayed payment surcharge from consumers		43.63	47.99	52.79
16	Any other subsidies / grants other than those u/s 65		0.00	0.00	0.00
17	Commission on collection of Electricity Duty for MCD		0.00	0.00	0.00
	Sub-Total		**219.21**	**206.58**	**227.24**
	TOTAL	**91.81**	**243.87**	**228.02**	**250.82**

Commission's views

The Commission has accepted the CSPDCL's projection of non-tariff income for FY 2009-10 at existing charges. However, as the Commission has abolished the meter hire charges for domestic category in this order, the impact of same has been consdiered while discussing the revenue at approved tariffs.

5.4.14 Provision for Bad debts and Other Debits

Regulation 23 of the Commission's tariff regulations stipulate that the provision for writing off of bad and doubtful debts of the distribution licensee shall be allowed up to 1% of the receivables subject to actual writing off of bad and doubtful debts. Accordingly, the Commission approves a provision of Rs. 35.71 crore, which is 1% of the approved revenue of CSPDCL for FY 2009-10.

Table 5.52

Other Debits for FY 2009-10 for CSPDCL (Rs. Crore)

Particulars	FY 2009-10	
	Petition	Approved
Other Debits	44.60	35.57

5.4.15 Annual Revenue Requirement of CSPDCL for FY 2009-10

The Annual Revenue Requirement (ARR) of CSPDCL is the summation of all the expenditure heads and the reasonable return discussed above, less the non-tariff income. The ARR as projected by CSPDCL in its petition for FY 2009-10 and as approved by the Commission is given in the table below:

Table 5.53

Annual Revenue Requirement of CSPDCL for FY 2009-10 (Rs. Crore)

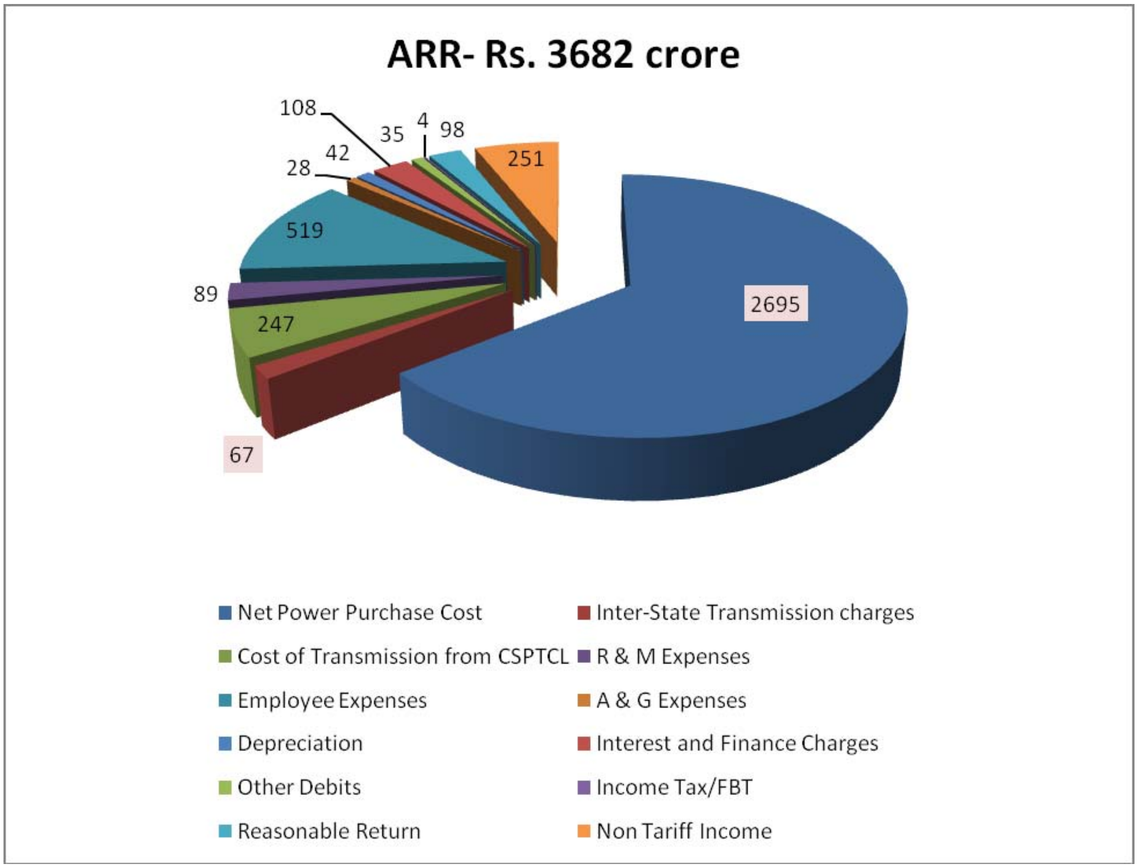
S. No	Particulars	Petition	Approved by the Commission
A	**Expenditure**		
1	Cost of power purchase from CSPGCL	2019	1745
2	Power purchase Expenses – Others	1564	1679
	Sub Total	3584	3424
3	Less: Revenue from Sale of Surplus Power	247	729
	Net Power Purchase Cost	**3336**	**2695**
4	Inter-State Transmission charges	**67**	**67**
5	Cost of Transmission from CSPTCL	**283**	**247**

S. No	Particulars	Petition	Approved by the Commission
6	O&M Expenses	**776**	**669**
a)	R & M Expenses	92	92
b)	Employee Expenses	648	548
c)	A & G Expenses	37	30
7	Depreciation	43	42
8	Interest and Finance Charges	59	125
9	Less: Expenses capitalised	39	33
10	Less: Interest & Finance Charges capitalised	8	17
11	Other Debits	45	35
12	Income Tax/FBT	4	4
	Total Expenditure (Total A)	**4567**	**3835**
B	Add: Reasonable Return	144	98
C	Less: Non Tariff Income	251	251
D	**Aggregate Revenue Requirement (A+B-C)**	**4460**	**3682**
	Projected Sales	**12393**	**12121**
	Adjusted Average Cost of Supply (Rs./kWh)	**3.60**	**3.04**

The Commission has approved the ARR of Rs. 3682 crore for FY 2009-10, as compared to the CSPDCL's projection of Rs. 4459.8 crore. The adjusted average cost of supply after considering the revenue from sale of surplus power works out to Rs. 3.04 per kWh, as compared to CSPDCL's projection of Rs. 3.60 per kWh.

In case the power purchase costs and revenue from sale of surplus power is not adjusted and the cost of power purchase to the extent of projected energy requirement of CSPDCL is considered based on merit order dispatch principles, the average cost of supply works out to Rs 3.15/kWh. However, as discussed earlier, due to seasonal variations in demand, the projected energy availability from various sources will result in surplus energy and hence this surplus energy should be sold to the grid either through the UI under-drawal mechanism or through bilateral contracts. Hence the Commission has considered the revenue from sale of such surplus energy while computing the adjusted average cost of supply.

It has to be noted that the cost of power purchase from CSPGCL and the cost of transmission charges payable to CSPTCL have been taken in the ARR above for the whole year. The CSPDCL is therefore liable to pay generation tariff and transmission charges decided by the Commission in this order w.e.f 01.04.2009, i.e. beginning of the financial year.



This cost of supply is the average cost of supply for all consumer categories and all the voltage levels. The component-wise cost of supply per unit, as approved by the Commission depicted the table pie-chart above.

5.4.16 Efficiency Parameters

The cost components of average cost of supply of Rs. 3.04 per unit approved by the Commission for FY 2009-10, are as given below:

Table 5.54

Cost Components of average cost of supply for FY 2009-10

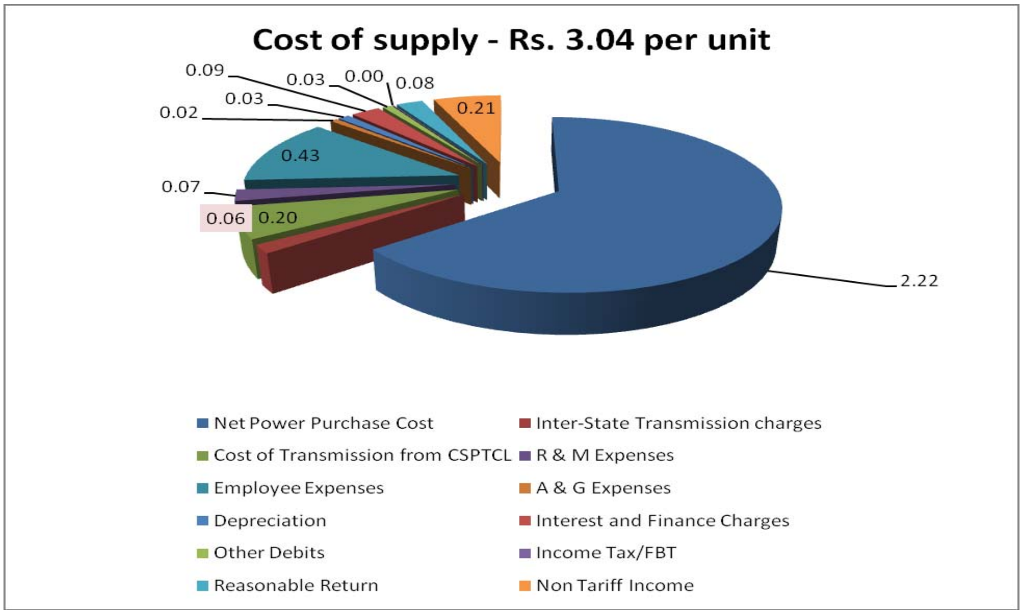
Particulars	Rs./unit
Net Power Purchase Cost	2.22
Inter-State Transmission charges	0.06
Cost of Transmission from CSPTCL	0.20
R & M Expenses	0.07
Employee Expenses	0.43
A & G Expenses	0.02

Particulars	Rs./unit
Depreciation	0.03
Interest and Finance Charges	0.09
Other Debits	0.03
Income Tax/FBT	0.001
Reasonable Return	0.08
Non Tariff Income	0.21
Average Cost of Supply	**3.04**

The approved A&G expenses per unit for FY 2009-10 as shown in the table above is Rs. 0.02 per unit of sale which is comparatively lower than A&G expenses per unit for distribution companies of other states like Orissa where A&G expenses are in the range of Rs. 0.04 per unit to Rs. 0.09 per unit, Uttar Pradesh where A&G expenses are in the range of Rs. 0.02 per unit to Rs. 0.05 per unit, Gujarat where A&G expenses are in the range of Rs. 0.03 per unit to Rs. 0.04 per unit.

The approved R&M expenses per unit for FY 2009-10 as shown in the table above is Rs. 0.07 per unit which is comparable with the R&M expenses per unit for distribution companies of other states like Orissa where R&M expenses are in the range of Rs. 0.06 per unit to Rs. 0.14 per unit, Uttar Pradesh where R&M expenses are in the range of Rs. 0.07 per unit to Rs. 0.08 per unit, Gujarat where R&M expenses are in the range of Rs. 0.05 per unit to Rs. 0.07 per unit.

The approved employee expenses per unit for FY 2009-10 as shown in the table above is Rs. 0.43 per unit of sale is however, comparatively higher than the employee expenses per unit for distribution companies of other States even at Rs. 0.28 per unit excluding terminal benefits. In Orissa employee expenses are in the range of Rs. 0.26 to Rs. 0.68 per unit; in Uttar Pradesh where employee expenses are in the range of Rs. 0.23 to Rs. 0.26 per unit; in Gujarat these are in the range of Rs. 0.21 to Rs. 0.22 per unit. The cost per employee to the company is high at around Rs. 43000 per employee per month (including contribution to pension fund) and around Rs 28000 per employee per month (excluding contribution to pension fund), while 50% of the employees of CSPDCL are in the lowest (class IV) category. The company should keep its employee costs under control.



5.5 Wheeling Charges for Distribution Open Access Consumers

The wheeling charges for the distribution open access consumers has been determined from the distribution ARR approved by the Commission as discussed above, and in accordance with the methodology adopted by the Commission in the tariff order for FY 2007-08, as discussed below.

The approved distribution (wires) cost is the cost of the distribution system on a stand-alone basis, after excluding the costs of the generation function, transmission function, and the power purchase costs, as given in the table below:

Table 5.55

Approved ARR for the Distribution Wires Business of CSPDCL (Rs. Crore)

Sl.	Particulars	FY 2009-10
		Approved by Commission
1	Net R&M Expenses	89.5
2	Net Employee Expenses	518.8
3	Net A&G Expenses	27.9
4	Depreciation	42.2
5	Net Interest & Finance Charges	107.6
6	Other Debits (incl. Prov for Bad debts)	34.5
7	Income Tax/Fringe Benefit Tax	4.2
8	**Total Expenditure**	**824.7**
9	Add: Reasonable Return	98.4
10	Less: Non tariff income	250.8
11	**Aggregate Revenue Requirement**	**672.3**

The wheeling charges have to be determined on the basis of the ARR of Rs. 627.3 crore approved above, less the interest on consumers' security deposit, and considering the energy input to the 33 kV system as given in the table below:

Table 5.56
Wheeling Charges for open access at 33 kV voltage level

Sl.	Particulars	Units	Approved by Commission for FY 2009-10
1	Energy input to transmission system	MU	16609
2	Transmission Losses	%	814
3	EHV Sales (as approved by Commission)	MU	3469
4	Energy supplied at 33 kV level	MU	846
5	Total Energy input to 33 kV distribution system	MU	13173
6	Total distribution cost at 33 kV	Rs. Crore	672.3
7	Distribution cost for wires business (excl. interest on consumer security deposit)	Rs. Crore	647
8	Distribution cost for 33 kV voltage level [assuming 35% of (6)]	Rs. Crore	226.45
9	**Wheeling Charges for 33 kV voltage level**	**Paise/kWh**	**17**

The distribution system loss at 33 kV shall continue to be considered as 6%, to be borne in kind and debited to the energy account of the open access customers. The loss level has been retained as 6% in the absence of any study submitted by the CSPDCL.

5.6 Truing Up for FY 2007-08

5.6.1 Background

CSPDCL in its petition has submitted the provisional truing up analysis for FY 2007-08 based on allocation of expenditure of erstwhile CSEB, as per provisional accounts, under various heads. The summary of truing up for FY 2007-08 as submitted by CSPDCL is given in the following Table:

Table 5.57

Truing up for FY 2007-08 by CSPDCL (Rs. Crore)

Particulars	FY 2007-08 (Approved)	FY 2007-08 (Actual)
Cost of Power from CSPGCL	1046.23	1435.65
Power Purchase Expenses –Others	1216	1169.33
Interstate transmission charges		37.97
Cost of Transmission from CSPTCL	185.61	173.53
R&M Expense	51.65	33.01
Employee Expense	408.04	410.53
A&G Expense	20.8	24.85
Depreciation	11.51	12.23
Interest & Finance Charges (net off with interest charges capitalised)	9.3	21.5
Other Debits	30.81	11.79
Income Tax / FBT	3.57	70.14
Total Expenditure	**2983.52**	**3400.53**
Add: Reasonable Return	49.18	62.02
Less: Non Tariff Income	-91.81	-243.87
Aggregate Revenue Requirement	**2940.89**	**3218.68**
Average Cost of Supply (Rs/kWh)	**2.98**	**3.27**
Revenue Collection(Actual/Estimated)		**3574**
Sale of power within state		**2986**
Sale of power outside state		**588.47**
Surplus/(Gap)		**355**

The Company has, however, submitted that the accounts of the erstwhile CSEB for FY 2007-08 are not finalized and audited and hence the truing up proposed, has to be provisional based on provisional accounts. CSPDCL submitted that in FY 2007-08 the revenue surplus is Rs. 355 Crore mainly on account of income of Rs. 588.47 Crore earned from sale of power in the inter-state market in FY 2007-08. The average cost of supply for FY 2007-08 has risen to Rs. 3.27 per unit from the approved cost of Rs. 2.98 per unit. In their endeavour to serve the consumers, the new entities have embarked on capital expenditure projects entailing a very high level of capital infusion, much more than is possible to be funded through the normal revenue streams of these companies. The equity base of erstwhile CSEB was only Rs. 23 Crore as of FY 2007-08. This equity base is insufficient to be effectively leveraged by these companies to raise debt in the market, to help these companies fulfil their normal capital expenditure requirements, it has been proposed by the GoCG to convert the revenue surplus of FY 2007-08 and FY 2008-09, into the equity of these restructured companies in the Transfer Scheme.

Commission's views

During FY 2007-08, CSEB operated as an integrated utility and the three successor companies i.e., CSPGCL, CSPTCL and CSPDCL have been formed in January 2009 only. Further, the impact of truing up for FY 2007-08 needs to be passed on to consumers through CSPDCL's ARR. Therefore, the Commission instead of carrying out the truing up for each company i.e. CSPGCL, CSPTCL and CSPDCL separately has carried out the overall truing up of erstwhile CSEB, as elaborated below:

The truing-up exercise is undertaken generally at three levels, viz.,

(1) Considering the actual expenses and revenue vis-à-vis the approved expenses and revenue (surplus earned/net revenue gap)
(2) In addition to (1) above, apply efficiency norms specified by the Commission for T&D losses and generation efficiency
(3) In addition to (1) and (2) above, apply prudence check for all the expense heads.

Truing up under the approach (1) discussed above shows an over-recovery of Rs. 374 Crore in FY 2007-08. However, the accounts for FY 2007-08 are still provisional. As regards truing up under approach (2) above, by considering CSEB's performance on parameters such as T&D losses and generation norms, the Commission has accepted the T&D losses as submitted by the CSPDCL for FY 2007-08. Since the Commission has accepted the actual performance of CSEB as the reference level, it may not be appropriate to undertake truing up of the extra expenditure on purchase of power, on account of the higher loss levels reported by the CSPDCL. As regards the truing up on account of variation in performance parameters of generating stations, the Commission has elaborated on this aspect in section 3 of this order.

Truing up under approach (3) is not advisable in the absence of approved accounts, since the prudence of the expenditure will have to be assessed on the basis of details of each expenditure head, as reported in the audited accounts.

In the absence of audited accounts, the Commission has decided to carry out the provisional truing up for FY 2007-08 based on provisional accounts and factoring the variation in generation performance parameters. The Commission apart from fuel expenses (which have been considered on normative basis for truing up) has considered the actual expenses and revenue as reported in provisional accounts for truing up for FY 2007-08.

CSPDCL in its Petition has double accounted the income of Rs 369.52 crore earned from UI under-drawal. CSPDCL has reduced this income from the total power purchase costs as well as considered this income as part of sale of power outside the State. Subsequently, CSPDCL submitted that there was an error and income from UI has been considered twice. Due to this, the revenue reported by CSPDCL during FY 2007-08 is Rs 3876 crore instead of Rs 3598 crore. It is hard to accept mistakes of such important nature, and the sanctity of submitting the Petition under an affidavit is lost.

As regards, the Reasonable Return the Commission has observed that the CSPDCL has estimated the reasonable return for FY 2006-07, on the basis of erroneous computation, which includes return on amount of capital work in progress (CWIP), resulting in showing a higher reasonable return. Hence, the computation of reasonable return has been revised in accordance with the methodology specified in the previous order, which is in line with the Commission's tariff Regulations.

The Commission in its order for FY 2007-08 approved Reasonable Return of Rs 177.04 Crore consisting of Rs 139.33 Crore as return on equity till FY 2006-07 and Rs 37.72 Crore for assets capitalised in FY 2007-08. CSEB has even changed the base figures and has worked out the Reasonable Return of Rs 250.68 Crore for FY 2007-08. **The Commission has computed return on assets added during FY 2007-08 on pro-rata basis considering the date of capitalisation. The return has been computed as Rs. 166.83 crore as given in table below:**

Table 5.58

Truing Up for FY 2007-08 (Rs. Crore)

Particulars	Order	CSEB	Truing up
Reasonable Return till FY 2006-07	139.33	177.14	139.33
Assets Capitalised during FY 2007-08	2810	2577	2577
Normative Equity Component	843		773.1
Retrun on Equity Cmponent	37.71	73.53	27.50
Total Reasonable Return for FY 2007-08	**177.04**	**250.67**	**166.83**

Based on the above principles and methodology, the summary of overall truing up of expenses and revenue for FY 2007-08 is shown in the table below:

Table 5.59

Truing Up for FY 2007-08 (Rs. Crore)

S.No	Particulars	FY 2007-08		
		Approved by Commission	Petition	Truing Up
1	Own Generation Cost (Variable Cost Only)	538	670	612
2	Power Purchase	1216	1207	1207
3	R&M Expense	142	179	179
4	Employee Expenses	625	705	705
5	A&G Expense	61	66	66
6	Depreciation	88	90	90
7	Interest & Finance Charges	396	277	277
8	Less: Interest & other expenses capitalised	-206	-127	-127
9	Other Debits (incl. Provisioning for Bad debts)	31	12	12
10	Income Tax/ Fringe Benefit Tax	10	192	191
11	**Total Expenditure**	**2901**	**3271**	**3212**
12	Add: Reasonable Return	177	251	167
13	Less: Non tariff income	137	302	302
14	Less: Sale of Power outside State		588*	219
15	**Aggregate Revenue Requirement**	**2941**	**2632**	**2858**
16	Sales (MU)	9874	9850	9850
17	**Average Cost of Supply (Rs./kWh)**	**2.98**	**2.67**	**2.90**
18	Revenue from Sale of Power			
	Sale of Power within State		2986	3078
19	**Surplus/Gap**		**355**	**220**

** Error in Petition as UI income of Rs 369.52 Crore is double accounted*

Treatment of Surplus

During the technical validation sessions, the Commission asked CSPDCL for the legal basis (i.e., provision in Electricity Act, 2003 or Regulation), on which revenue surplus of FY 2007-08 has been proposed to get converted into equity of restructured companies in the Transfer Scheme. In reply, CSPDCL has submitted that the Transfer Scheme for transferring assets of erstwhile CSEB to its successor companies has not yet been notified by the Government of Chhattisgarh. However, a copy of the government order dated December 19, 2008 notifying the formation of the successor companies of the erstwhile CSEB has been submitted. The final Transfer Scheme is likely to be notified within a year of the initial order.

Commission's views

The Commission is of the view that in accordance with the provisions of Electricity Act, 2003 and the Commission's Regulations, the revenue surplus of FY 2007-08 cannot be converted into equity as this is the surplus earned over and above the reasonable return allowed by the Commission. The Commission has carried forward the approved revenue surplus of Rs 221 Crore to FY 2009-10 while estimating the overall revenue gap/(surplus).

The Companies, in their Petitions, have also proposed the ARR for FY 2008-09 and requested the Commission to approve the same. During FY 2008-09, CSEB operated as an integrated Utility till December 2008, and the Companies have been created and are operational from January 2009 onwards. The Companies have filed the Petitions for approval of ARR for FY 2008-09 in January 2009 based on allocation of common expenditure of erstwhile CSEB based on certain assumptions, in the absence of opening Balance Sheets. As the entire FY 2008-09 is now over, the Commission asked the Companies to submit the actual operational performance, actual expenditure and revenue for FY 2008-09. However, the Companies submitted that the entire actual data for complete FY 2008-09 is not available at this stage, and only submitted the following actual information:

- Operational performance of generating stations for entire FY 2008-09
- Category-wise sales and revenue data till January 2009 for LT category and till February 2009 for HT categories
- Capital Investments and O&M expenses till December 2008

As the entire FY 2008-09 is over, the Commission does not find any merit in approving the ARR for FY 2008-09 on the basis of projected numbers, and that too projections based on allocation of expenses amongst three companies, in the absence of opening Balance Sheets of the Companies. The Commission will consider and approve the actual ARR and revenue for FY 2008-09 based on Provisional Accounts of erstwhile CSEB for the period from April to December 2008 and Provisional Accounts of the three Companies for the period from January to March 2009, while processing the ARR and Tariff Petitions of the three Companies for FY 2010-11.

However, for approving the ARR for FY 2009-10, it is essential to have certain figures for FY 2008-09 and hence, the Commission in this order, has considered the various elements of expenditure for FY 2008-09 based on the details provided by the Companies. The consideration of expenses for FY 2008-09 in this order is merely for making more realistic projections for FY 2009-10, and should not be construed as approval of expenses for FY 2008-09 by the Commission.

5.7 Revenue at Existing Tariffs for FY 2009-10

The income of CSPDCL comprises revenue from sale of electricity and non-tariff income. The non-tariff income has been deducted while estimating the revenue requirement of the CSPDCL, hence, only the projected category-wise revenue is discussed below.

5.7.1 Income from existing tariff for FY 2009-10

The income from sale of electricity to the CSPDCL's consumers is based on the tariff applicable for each consumer category and the estimated sales to the category. The CSPDCL has estimated the revenue from existing tariff at Rs. 3635 crore for FY 2009-10 based on the projected category-wise sales as submitted in the petition.

Commission's views

The Commission has estimated the revenue from sale of electricity on the basis of the prevailing tariff applicable for each consumer category and the category-wise sales projected by the Commission, as discussed in earlier sections of the order. The Commission has continued with the approach of estimating the revenue from demand charges in case of HT categories, by considering billing demand as 75% of contract demand. This is the minimum guaranteed revenue to the CSPDCL, as per the billing demand definition, and it is likely that the CSPDCL will earn higher revenue through demand charges as the recorded demand of several consumers may be higher than the minimum prescribed level of 75%. However, the actual revenue earned by the CSPDCL will get accounted for under the truing up exercise.

CSPDCL while estimating the revenue for FY 2009-10 at existing tariffs has not considered the revenue impact of TOD Tariffs, Load Factor Incentive, Power Factor Penalty and Power Factor Incentive. During the Technical Validation Sessions, the Commission asked CSPDCL to submit the actual revenue data for all the HT categories during FY 2008-09. CSPDCL submitted the actual sales and revenue data for all the HT categories for the first eleven months of FY 2008-09 i.e., April 2008 to February 2009. The actual revenue data submitted by CSPDCL for eleven months includes the actual amount towards TOD Tariffs, Load Factor Incentive, Power Factor Penalty and Power Factor Incentive The Commission for FY 2009—10 has estimated the revenue impact of TOD Tariffs, Load Factor Incentive, Power Factor Penalty and Power Factor Incentive based on actuals submitted by CSPDCL for eleven months of FY 2008-09. The consumer category-wise revenue estimated by the CSPDCL and the Commission is given in the following table:

Table:5.60

Estimated Category-wise Revenue from Existing Tariff for FY 2009-10

(in Rs. Crore)

Sl.	Consumer Category	CSPDCL Petition	Estimated by Commission (with approved sale)
	LT Category		
1	BPL category	87	51
2	Other Domestic	390	397
3	Non-Domestic	198	186
4	Public Utilities	30	26
5	Industry	192	178
6	Agriculture	82	65
7	Agriculture Allied services	2	**2**
8	Temporary Supply	16	23
	Sub-total LT Category	**997**	928
	HT Category		
1	Railway Traction	290	286
2	Heavy Industries	662	629
3	Steel Industries	101	113
4	Coal Mines, Cement Industries & Other EHV Consumers	242	223
5	**EHV Revenue Subtotal**	**1295**	**1251**
6	Steel Industries	746	744
7	Coal Mines & Cement Industries	98	88
8	Other HT ind.	213	192
9	Low Load Factor Industries	48	18
10	Residential	83	26
11	Gen.Pur.Non-ind.	129	128
12	Public Water works & Irrigation	11	64
13	Start up Power	14	11
14	Temporary Supply	1	13
15	**Total HV Consumers**	**1344**	**1283**
16	**Total Revenue from HT Consumers including EHV Consumers**	**2638**	**2534**
17	**Net Penalties and Rebates**		(11)
18	**Total Revenue from LT and HT Consumers**	**3635**	**3451**

CSPDCL has projected the Average billing rate (ABR) of 2.93 Rs/unit in FY 2009-10. The Commission has approved ABR of 2.96 Rs/unit in previous tariff order for FY 2007-08 which is projected to reduce to 2.85 Rs/unit in FY 2009-10, mainly owing to change in sales mix. The ABR for FY 2009-10 as projected by the Commission is lower than the ABR projected by CSPDCL mainly due to the reason that the CSPDCL has not estimated the revenue from demand charges in case of HT categories, by considering billing demand as 75% of contract demand. The comparison of sales mix and ABR as approved by the Commission in its tariff order for FY 2007-08, as projected by CSPDCL and as approved by the Commission for FY 2009-10 is given in Table below:

Table:5.61

Sales Mix and ABR Comparison

Particulars	FY 2007-08		FY 2009-10	
	Approved by Commission	Actual	Petition	Approved by Commission
HT Sales	65%	64%	57%	60%
LT Sales	35%	36%	43%	40%
ABR (Rs./Kwh)	2.96	2.95	2.93	2.86

5.8 Revenue Gap/Surplus

The revenue gap/surplus is the difference between the revenue earned by the CSPDCL at the existing tariffs and the annual revenue requirement for FY 2009-10, after accounting for the amount of truing up for previous years, as given in the table below:

Table 5.62

Revenue Gap/Surplus in FY 2009-10 (Rs. Crore)

S.No	Particulars	CSPDCL Petition	Approved by the Commission
1	Adjusted Aggregate Revenue Requirement		3682
2	Truing up for FY 2007-08		220
3	Truing up for FY 2005-06 and FY 2006-07 as per Tariff Order		116
4	Net Surplus/(Gap) at Existing Tariff	(825)	105

Thus, the Commission has estimated a revenue surplus of Rs. 105 crore against the CSPDCL's projection of revenue gap of Rs. 825 crore.

6 TARIFF PRINCIPLES AND DESIGN

6.1 Tariff Principles

In assessing the revenue requirements of the three companies and in determining the generation tariff, the transmission charges and the retail supply tariff for the year 2009-10, the Commission has been guided by the provisions of the Electricity Act, the National Electricity Policy (NTP) and the Tariff Policy (TP), the Central Commission's Terms and conditions of Tariff regulations of 2009 and this Commission's Terms and Conditions of determination of Tariff regulations of 2006. Section 61 of the Act lays down the principles which should guide determination of retail supply tariff and these are that the tariff should 'progressively reflect the cost of supply of electricity' and also 'reduce cross-subsidy' within the period to be specified by the Commission. The Act lays special emphasis on safeguarding consumer's interest and requires that the 'cost should be recovered in a reasonable manner'. These and other principles enunciated in this provision of the Act have been suitably incorporated in the tariff regulations of this Commission. The Tariff Policy notified by the Government of India in January, 2006 provides comprehensive guidelines for determination of tariff as also for working out revenue requirements of power utilities. The Commission has been guided by this Policy.

The one stipulation of the Tariff Policy, which has not been followed by the Commission, is the multi-year-tariff (MYT) framework for determination of tariff. Although in the last tariff order for the year 2007-08, the Commission had decided that MYT regime would be introduced from the year 2009-10, it is not possible to do so for various reasons which have been enumerated in the order.

Since this is a time of transition in the electricity sector in the State, the erstwhile CSEB having been unbundled to three companies on functional lines, the Commission does not want to make major modifications in the prevailing tariff. However, the Commission has endavoured to carry forward the process of rationalization of tariff, the process which was started with the first tariff order passed by this Commission for the year 2005-06, in order to ensure that the tariffs reflect, as far as practicable, the cost of supply. The mandate of Tariff Policy that tariff should be within plus/minus 20% of the average cost of supply by 2010-11 has been the guided principle. Although the Commission has not laid down the road map for reduction of cross-subsidy, the subsidies are being reduced over the years and it has been followed this year also. For determination of cross-subsidy the Commission has relied on average cost of supply in the absence of relevant data for working out voltage-wise or consumer category-wise cost of supply. The Commission has followed the cost plus method for regulated cost of return.

6.2 Tariff Design

CSPDCL has estimated the revenue gap of Rs 825 Crore in FY 2009-10 at existing tariffs and has proposed category-wise retail tariffs designed to earn additional revenue of Rs. 825 crore, to cover the projected revenue gap. The company should have adjusted surplus of FY 2007-08 while arriving at the revenue gap for FY 2009-10. However, on detailed scrutiny of the revenue requirement proposed by the CSPDCL, the Commission has arrived at a more realistic revenue requirement of Rs 3682 Crore as against CSPDCL's estimate of Rs 4460 Crore. As discussed in Section 5 of this order, the Commission has carried out the truing up for FY 2007-08 and has also considered the provisional truing up carried our for FY 2005-06 and FY 2006-07 in tariff order for FY 2007-08. The ARR approved by the Commission for FY 2009-10 will be met from the revenues at proposed tariffs and truing up of FY 2005-06, FY 2006-07 and FY 2007-08 and the tariff determined by the Commissionfor FY 2009-10 leaving a surplus of Rs. 105 crore.

This surplus could have been passed on to consumers by way of reduction in tariff. The Commission has, however, decided that this amount be kept as a separate fund to be the 'tariff stabilization fund' for balancing the tariff in the future years. This should appear to be the most reasonable course at this juncture because the effect of restructuring of erstwhile Board is not yet clear. Secondly, the ARR for the year 2008-09 has not been approved by the Commission. It will be scrutinized and approved on the basis of actual expenditure when the tariff petition for the year 2010-11 is submitted by CSPDCL.

The Commission has proceeded to rationalise and reduce the tariffs to certain extent, to reduce the present level of cross-subsidy. The process of rationalisation of consumer categories, which was initiated in the previous two tariff orders of the Commission, has been carried forward in this order also.

The revised consumer categorisation reflects the purpose of supply as well as the voltage of supply, and the tariffs have been designed accordingly.

6.3 LT Tariff

At present there are 6 categories with 12 sub-categories in LT tariff. Only one new sub-category has been introduced in LV2 Non-Domestic category; no other change has been made in the LT tariff categories.

6.3.1 LV-1 : Domestic

CPSDCL has submitted that the preliminary results of a study being carried out by a consultant on assessment of line losses and cost of supply, reveals that the average consumption of BPL consumers may be as high as 80 units/month. The consumptions of 80 units/month can not be categoriesed under domestic BPL category. This implies that the consumers with higher consumption but holding BPL cards, are availing the benefit of this tariff.

The Commission, in its last tariff order has ruled that LV1 BPL tariff would be applicable only to such consumers whose connected load is not more than 120 Watts and monthly consumption not more than 30 units per month and who hold BPL cards. However, the Commission has observed that due to seasonal variation in usage pattern and also variation due to some festivals, etc., BPL consumers may be facing difficulty if consumption in some month is more than 30 units. Hence, the Commission has now laid down that LV1 BPL tariff would be applicable only to such consumers whose connected load is not more than 120 Watts and total consumption in a year is not more than 360 units (i.e. average monthly consumption of 30 units per month) and who hold BPL cards. This should not imply that the meters of this category of consumers should be read and checked only once in a year. The objective is that while BPL consumers may be billed on the basis of average consumption of 30 units/month, their entitlement to this tariff category may be determined on an annual basis. All such consumers whose total consumption in a year exceeds 360 units must be placed in domestic LV-1.2 category. We have already mentioned that if the connected load in any household exceeds 120W it should be converted to domestic LV-1.2 category without waiting for the annual consumption. The misuse of this highly subsidized tariff of BPL category is quite evident from the study mentioned above. The CSPDCL should ensure that domestic category of consumers are not converted to BPL category only on the basis of the BPL card.

The CSPDCL has proposed to increase the average consumption of this tariff category to 40 units/month. We had enquired of the State Government if they are prepared to provide subsidy to the extent of the increased consumption of 40 units proposed. The State Government in the Energy Department vide their letter No. 201/Tariff Yachika/V.S.U/2009 dated 23.5.2009 have informed the Commission that the Government does not contemplate any change in the subsidy levels being provided presently to BPL consumers and that it will be limited to 30 units/month only. We are accordingly not changing the consumption level in this tariff category as proposed by CSPDCL.

As detailed in Section 5, the Commission has accepted the proposal of migration of BPL consumers having consumption above 30 units per month to Other Domestic subcategory. The tariff for BPL category has been retained at same level as earlier.

In other domestic (LV 1.2) category, there are four slabs and the slabs have been retained as per previous tariff order. The tariff for the slab 0-500 has been reduced by 05 p per unit.

The tariff for consumers of higher consumption slab of 0-700 and above units has been marginally increased to bring it closer to average cost of supply.

6.3.2 LV-2 : Non-Domestic

The Commission has also introduced a new slab under this category to rationalise the tariff applicable to small non-domestic consumers, so that consumers having consumption level of less than 100 units/month, do not have to pay the tariff at same level as paid by consumers with much higher consumption. The slabs for non-domestic consumers have been changed, and are now as follows:

- 0-100 units
- 0-500 units
- 0 - above 500 units

The applicability of these slabs are non-telescopic, which means that billing shall be done for all the energy consumption in a particular slab.

The fixed charges for non-domestic consumers has been retained at existing level. The energy charges for the slab of 0-100 has been kept at Rs 2.75 per unit for small consumers. Energy charges for slab of 0 – 500 units has been reduced from Rs. 3.70 to Rs 3.25 per unit, and the energy charges for the slab of 0 – above 500 units has been reduced from Rs. 4.0 to Rs 3.75 per unit with the objective of reducing cross-subsidy. Non domestic tariff is one of the highest tariffs and hence some rationalisation was called for.

The Commission has introduced an optional **demand based tariff** for non-domestic category to remove practical difficulties faced by consumers as well as CSPDCL, and this tariff will be applicable for consumers having contract demand from 15 KW to 75 KW.

The overall tariff of non- domestic categories have been reduced by 9.75%.

6.3.3 LV-3 : Agriculture

Agriculture tariff has traditionally been highly subsidized. CSPDCL has submitted that it has completed metering for 91% of agriculture consumers and the Commission has directed CSPDCL to complete the remaining metering by September 2009.

a) In this order the optional flat rate tariff for existing connections above 3 HP load has been discontinued. Now, these consumers would be billed on actual metered consumption. Incase a 5HP connection still does not have a meter, billing will be done on the basis of average load factor of this consumer category. Since the State Government has decided to provided full subsidy to consumer of this category, this change over will have no effect on agricultural consumers.

b) Existing connections up to 3 HP load shall have the option of being billed on actual metered consumption or on flat rate basis.

c) The Commission feels that in order to encourage energy conservation and demand side management activities, it is necessary to incentivise or penalise consumers, based on their power factor. All existing connections of above 3 HP load not provided with capacitors of specified rating shall be required to pay surcharge of 30 paise per unit. Power factor incentive and surcharge is discussed later in this section.

The change in applicability of un-metered tariff from upto 5 HP to upto 3 HP may result in some increase in tariff for this category.

6.3.4 LV-4 : Agriculture Allied Activities

The name of this category has been modified from "Agriculture Allied Services" to "Agriculture Allied Activities". This special tariff is applicable for poultry, hatchery, fishery, cattle breeding farms, tree plantation, tissue culture, seri-culture and aqua-culture laboratories and food processing units etc. The tariff for this category is retained at existing levels.

6.3.5 LV-5 : L.T. Industries

a) The monthly tariff minimum charges for LT Industries (excluding demand based tariff) has been discontinued by the Commission. **Now the consumers of this category have to pay only fixed charges in case there is no consumption in a particular month.**

b) The tariff for all the sub-categories have been retained at exiting levels.

c) Consumers having contracted load above 100 HP were required to avail HT supply by 31.12.2005. Such consumers, who even now have not changed over to HT connection even after four years, will now attract heavier penalty and shall be billed 30% additional charges on tariff 5.2.2 till they switch over to HT connection, which was earlier 25% as per last tariff order.

d) The existing demand based tariff has been continued which is applicable for contract demand from 15 KW to 75 KW.

6.3.6 LV-6 :Public Utilities

This tariff is applicable to both public street lights and public water works. The CSPDCL had proposed hike of around 40% in this category. The State Government in the Urban Development Department has requested not to hike the tariff of this category in the public interest. No change in this category has been made. The tariff has been retained at existing levels. The present tariff is below cost of supply and hence no further reduction is desirable.

6.3.7 L.T. Temporary Supply

The tariff is maintained at one and half times the tariff for the respective categories. All temporary connections including agricultural connections, shall be metered and only metered tariff will be applicable to such connections. The Commission has made some changes in provisions of billing in case of load enhancement, which has been discussed in Section-7 (Schedule of Tariff). The main change is that a consumer under this category need not deposit the assessed tariff for the entire period of temporary connectivity initially but only for consumption of three months.

6.3.8 Power Factor Incentive and Surcharge

Power Factor Surcharge

Power factor correction is required to the extent possible. Ideally it should be close to unity. Pump and tubewells typically have a low power factor. The Commission with a view to encourage power factor correction, has provided power factor incentive and has levied surcharge on agriculture consumers with load more than 3 HP also. This ruling would have the following benefits to cosumers and CSPDCL :

(i) Improve voltage profile of consumers;
(ii) increase operating life of motors;
(iii) reduce T&D losses;

The changes made in applicability of power factor surcharge as compared to the last tariff order is tabulated below

S.NO	Tariff Order – FY 2007-08	Tariff Order- FY 2009-10
1	Capacitors of specified capacity required to be installed for all the induction motors having load of more than 3HP.	Suitable Capacitor of adequate capacity needs to be installed to maintain a power factor of 0.85 or above, for all the types of loads for 3 HP and above (excluding domestic & non-domestic less than 15 kW).
2	Power factor surcharge applicable to Agriculture consumers having connecrted load of more than 5HP.	Power factor surcharge is applicable to Agriculture consumers having connecrted load of more than 3HP.
3	Power factor surcharge applicable to domestic and non-domestic consumers with connected load of 15 kW and above.	Power factor surcharge is applicable to domestic and non-domestic consumers with connected load of 15 kW and above.

All LT industrial, agriculture allied, agriculture and public water works consumers whose contracted load /connected load is above 3 HP shall arrange to install low tension suitable capacitors of appropriate capacity at their cost. The consumers shall also ensure that the capacitors installed by them are properly matched with the actual requirement of the load so as to ensure average monthly power factor of 85% or above. A consumer who fails to do so shall be liable to pay power factor surcharge @ 30 (thirty) paise per unit on the entire consumption of the month.

All LT domestic, non-domestic consumers with contracted load/connected load of 15 KW or above, shall arrange to install low tension suitable capacitors of appropriate capacity at their cost. The consumers shall ensure that the capacitors installed by them are properly matched with the actual requirement of the load so as to ensure average monthly power factor of 85% or above. A consumer who fails to do so will be liable to pay low power factor surcharge @ 30 (thirty) paise per unit on the entire consumption of the month.

All LT installations which have welding transformers are required to install suitable capacitor(s) so as to ensure power factor of not less than 85%. Consumers not complying with the above shall have to pay surcharge of 75 (seventy-five) paise per unit on the entire monthly consumption, provided the load of the welding transformer(s) exceeds 25% of the total connected load.

A period of three months shall be allowed to the consumrs to install capacitors and make the penal provision applicable only w.e.f October 1, 2009.

Power Factor Incentive

All categories of LT consumers to whom power factor surcharge is applicable; shall also be eligible for power factor incentive. Such incentive shall be payable @ of 10 paise per unit on the entire consumption of that month in which he maintains an average monthly power factor equal to or above 90% and @ 20 paise per unit on entire consumption of that month in which he maintains an average monthly power factor of 95% or above. This shall be effective from 1.7.2009.

The average monthly power factor recorded in the meter shall be considered for billing of power factor surcharge or power factor incentive, as the case may be.

Levy of power factor surcharge as indicated above shall be without prejudice to the rights of the CSPDCL to disconnect the consumer's installation if the average monthly power factor remains below 0.7 for a period of more than two consecutive months. It shall remain disconnected till the consumer makes suitable arrangements to improve the power factor to the satisfaction of the CSPDCL.

6.4 HT Tariff

The Commission has introduced one more HT category and 4 sub-categories in this tariff order.

6.4.1 EHV Categories

The Commission has made the EHV tatiff applicable for consumers who avail supply at 400 kV, in addition to 220 and 132 kV under EHV categories.

6.4.1.1 EHV 1-Railway Traction

Tariff for this category has been retained at existing levels to reduce the current level of cross-subsidy, as average cost of supply has increased to Rs 3.04 per unit for FY 2009-10 from Rs 2.98 per unit approved by the Commission in its previous tariff order for FY 2007-08. Since, the average cost of supply has increased by 6 paise and tariff is retained at the same level, as determined with average COS of Rs 2.98, hence, cross subsidy level for this category has been reduced.

6.4.1.2 EHV-2-Heavy Industries

All connections having contract demand of more than 20 MVA are in this category. Tariff for this category has been retained at existing levels.

6.4.1.3 EHV 3- Steel Industries

The tariff for this category has been retained at existing levels.

6.4.1.4 EHV 4 -Other EHV consumers

The tariff for this category has been retained at existing levels.

6.4.2 HV Categories

6.4.2.1 HV-1 : Steel industries

A new sub-category for consumers availing supply at 11 KV level has been introduced in this order. The Commission, has approved a separate tariff for steel and related industries availing supply at 33 KV and 11 KV with demand charges of Rs. 310/KVA and Rs 320/KVA for industries availing supply at 33 KV and 11 KV, respectively. Energy Charges for 33 KV has been retained at existing level of Rs 2.30 per unit and for 11 KV, it is kept at at Rs 2.40 per unit, marginally higher than the energy charges at 33 kV. The provision for load factor incentive for industries operating above 70 % load factor has been retained. However the rate of incentive has been fixed at 15 paise/unit. For estimating load factor for the purpose of this incentive, the average power factor of 0.9 or actual average monthly power factor, whichever is higher; shall be taken. If maximum demand is more than the contract demand in any month, then the maximum demand recorded shall be taken for calulation of load factor in place of contract demand.

6.4.2.2 HV -2 : Mines and Cement industries

Apart from Coal Mines and Cement Industries, Mining have also been included in this category. A new sub-category for consumer availing supply at 11 KV level has been introduced in this order. The Commission, has approved a separate tariff for mining and cement industries availing supply at 33 KV and 11 KV with demand charges of Rs. 310/KVA and Rs 320/KVA for industries availing supply at 33 KV and 11 KV, respectively. Energy Charges for 33 KV is retained at existing level and for 11 KV, energy charges are fixed at Rs 3.45 per unit, marginally higher than the energy charges at 33 kV.

6.4.2.3 HV -3 : Other industries

The Commission has retained demand charges for this category at existing levels while energy charges for 33 KV have been reduced marginally from Rs, 2.90 to Rs 2.80 per unit and for 11 KV from Rs. 3.0 to Rs 2.90 per unit. The tariff for this category is comparatively high.

6.4.2.4 HV -4 : Low load factor industries

The demand charge for this category is retained at existing levels but energy charges have been reduced by 10 paise per unit for each of the sub-category.

6.4.2.5 HV- 5 : Residential Purpose

The demand charge for this category is retained at existing levels but energy charges have been reduced by 10 paise per unit for each of the sub-category.

6.4.2.6 HV- 6 : General purpose non-industrial

Demand charge for this category is retained at existing levels but energy charges have been reduced by 10 paise per unit for each of the sub-category as a part of rationalisation of tariff.

6.4.2.7 HV- 7 : Public water works & Irrigation

This tariff is applicable to both public street lights and public water works. The CSPDCL has proposed hike of around 40% in this tariff category. The State Government in the Urban Development Department has requested the Commission not to hike the tariff of this category in Public interest. No change in the tariff for this category has been made; the tariff has been retained at existing levels.

6.4.2.8 HV-8 : Start-up Power

This tariff is applicable to those consumers who avail supply for start-up of generators at 400/220/132/33/11 KV including biomass based generators, hydro generators and captive power plants. Start-up power tariff shall also be applicable to the generators who are co-located with industrial load.The tariff for this category has been retained at the existing levels.

6.4.2.9 HV-9: -H.T. AGRICULTURE ALLIED ACTIVITIES

The Commission, in order to rationalise and provide equitable treatment to the consumers in this category is introducing “HT Agriculture Alllied Activities” in the order to help those consumers who are being charged at a HV tariff as they are availing supply at HV level, but their nature of usage of electricity is similar to “LT Agriculture Alllied Activities”. This tariff will be applicable to pump connections, other equipments and light and fan for tree plantation, fisheries, hatcheries, poultry farms, dairy, cattle breeding farms, sericulture, tissue culture and aquaculture laboratories and food processing industries availing supply at HV level.

6.5 TOD Tariff

The Tariff Policy (para 8.4) as stipulated provides that time differentiated tariff be introduced on priority for large consumers (say, consumers with demand exceeding 1 MW) within one year, in order to flatten the peak load curve and implement energy conservation measures.

Presently ToD regime has three time periods viz., normal period, evening peak load period and off-peak load period. CSPDCL has proposed to change this to two time periods, namely, normal period and peak period, due to the following reasons:

a) In this state, off-peak periods are in variance with the off-peak time periods applicable to other states of the country
b) No concession is justifiable during night hours as the demand increases substantially during these hours. CSPDCL has proposed to charge normal tariff during night periods also.
c) All HT categories (excluding Railway traction, Public utilities) and LT categories having connected load above 50 KW (excluding Domestic, Agriculture, Agriculture allied activities and Public utilities) should be covered under the ToD regime.

The Commission has observed that, in order to avail the benefit of TOD incentives a number of consumers have shifted their load to night hours, due to which flattening of load curve has occurred over a period of time. But, in case TOD rebate is abolished as proposed by CSPDCL, the consumers who have shifted their consumption to night hours, may shift back to their original usage pattern, which is not desirable. Hence, considering the views of various stakeholders, the Commission, has retained prevailing timings of TOD regime and has also retained the incentive during off peak period and surcharge during evening peak period at the existing level.

6.6 Power Factor Incentive and Penalty

No change in the present principle and methodology of power factor incentive and penalty for EHT & HT consumers has been made in this order.

6.7 Billing In Case of Excess Supply

CSPDCL has proposed, that at present the penal provision on excess demand is 1.5 in practice, to be increased to 2 times (twice), similar to the provision of Section-126 sub section (6) of The Electricity Act 2003 (EA 2003). Section -126 deals with cases of unauthorised use of electricity. The defination of unauthorised use given in sub Section-(6) (b) of Section -126 does not include excess use. Therefore, the proposal of the company is not acceptable.

The present penal provisions for excess supply at one and half times are sufficient to dissuade consumers from exceeding contract demand.

6.8 Miscellaneous and General Charges

The Commission has abolished meter hire charge being levied by CSPDCL for all domestic consumer categories as the meters are part of the assets of the CSPDCL and, therefore, any expenditure on meters forms a part of fixed expenditure in ARR and is recovered through tariff in the form of fixed charges.

The Miscellaneous Charges under all other head have been retained at existing level.

6.9 Variable Cost Adjustment Formula (VCA)

The Commission will issue the Order in respect of VCA formula.

6.10 Rounding Off

The amount of HT energy bill shall be rounded off to the nearest multiple of Rs.10. This is being done to facilitate payment by consumers.

6.11 Delayed Payment Surcharge

If the bill is not paid by the consumer within the period prescribed (due date) for payment of the bill, a surcharge @ 1.5% per month or part thereof, on the total outstanding amount of the bill (including arears, if any, but excluding amount of surcharge), shall be payable in addition, from the due date of payment as mentioned in the bill. The method of calculation of surcharge shall be same in cases of both LV and HV category of consumers.

6.12 Advance Payment Rebate -

A rebate @ 0.5% per month will be payable on the net amount of advance at the end of the billing cycle of that particular month and the whole amount of advance (including rebate) shall be credited to consumer's account in next month's bill.

6.13 Revenue From Approved Tariffs

The expected consumer category-wise revenue from the approved tariffs given in the tariff schedule, and the average tariff for FY 2009-10, is given in the table below:

Table 6.1

Estimated Revenue from Approved Tariff for FY 2009-10

Category		Voltage	Approved by the Commission FY 2009-10 (at Proposed Tariff) Sales	Revenue (Rs. Cr.)	ABR (Rs./Kwh)
	BPL		335	51	1.53
	Other Domestic		2045	398	1.94
	Non-domestic		431	168	3.89
	Agriculture		1339	103	0.79
	Agriculture allied services		5	2	3.00
	LT Industrial		485	178	3.68
	Public Utilities (PWW & SL)		136	26	1.89
	Temporary		79	22	2.82
	LT Sub total		**4855**	**947**	**1.96**
	HT consumers				
EHV-1	Railway Traction	220/132 kV	728	286	3.93
EHV-2	Heavy Industries	220/132 kV	1735	629	3.62
EHV-3	Steel Industries	220/132 kV	433	113	2.61
EHV-4	Coal Mines, Cement Ind. & other EHV Consumers	220/132 kV	573	223	3.89
HV Consumer					
HV-1	Steel Industries	33kV	2428	744	3.07
HV-2	Coal Mines & Cement Ind.	33kV	211	88	4.16
HV-3.1	Other HT Ind.	33kV	461	178	3.85
HV-3.2		11kV	19	8	4.55
HV-4.1	Low Load Factor Industries	33kV	31	13	4.24
HV-4.2		11kV	11	5	4.44
HV-5.1	Residential Purpose	33kV	90	25	2.80
HV-5.2		11kV	1	0	3.32
HV-6.1	General Purpose Non-Industrial	33kV	223	94	4.22
HV-6.2		11kV	70	31	4.45
HV-7.1	Public Water works & Irrigation	33kV	249	63	2.53
HV-7.2		11kV	3	1	3.50
HV-8	Start-up Power	132 KV	9	11	13.16
HV 9	Temporary		22	13	5.73
	HT Total		**7295**	**2525**	**3.46**
	Total		**12121**	**3472**	**2.86**
	Net Penalties & Rebates			(6)	
	Grand Total		**12121**	**3466**	**2.86**

* Average billing rate (ABR)

The revenue at approved tariffs works out to Rs 3466 Crore. The estimated revenue from the approved tariffs, as above, results in a marginal increase in revenue of about Rs. 15 crore which has been adjusted against the loss of revenue due to abolition of meter hiring charges of domestic consumers.

6.14 Cross-Subsidy

An element of cross-subsidy is inherent in the present tariff structure. The tariffs of different consumer categories in relation to the average cost of supply (COS) has been such that the tariffs for some categories of consumers, mainly HT consumers, are higher than the COS while the tariffs for others are lower. The level of cross-subsidy in the tariff, excluding penalties and rebates, determined in this order is given in the table below:

Table 6.2

Cross-subsidy with Existing and Approved tariffs

Particulars		Sales (in MU)	Average Billing Rate at Existing Tariff (Rs./Unit)	Average Billing Rate at Proposed Tariff (Rs./Unit)	Average Cost of Supply (CoS) (Rs./Unit)	Tariff as % of avg CoS	
						At Existing Tariff	At Revised Tariff
LT Consumers	BPL Consumers	335	1.53	1.53	3.04	50%	50%
	Other Domestic	2045	1.94	1.94	3.04	64%	64%
	Non-domestic	431	4.31	3.89	3.04	142%	128%
	Agriculture	1314	0.50	0.79	3.04	16%	26%
	Industry	485	3.68	3.68	3.04	121%	121%
	Public Utilities (PWW & SL)	136	1.89	1.89	3.04	62%	62%
	Temporary	79	2.89	2.82	3.04	95%	93%
	Sub Total: LT	**4825**	**1.92**	**1.96**	**3.04**	**63%**	**65%**
EHV Consumers	Railway Traction	728	3.93	3.93	3.04	129%	129%
	Heavy Industries	1735	3.62	3.62	3.04	119%	119%
	Steel Industries	433	2.61	2.61	3.04	86%	86%
	Coal Mines, Cement Indusries & Other EHV Consumers	573	3.89	3.89	3.04	128%	128%
HV Consumers	Steel Industries	2428	3.07	3.07	3.04	101%	101%
	Coal Mines & Cement Industries	211	4.16	4.16	3.04	137%	137%
	Other HT Industries	480	3.98	3.88	3.04	131%	128%
	Residential	91	2.91	2.81	3.04	96%	92%
	Public water works/ Irrigation	252	2.51	2.52	3.04	83%	84%
	General (Non-Industrial)	292	4.37	4.27	3.04	144%	141%
	Low Load factor	42	4.39	4.29	3.04	144%	141%
	Start up Power	9	13.16	13.16	3.04	433%	433%
	Temporary	22	11.47	11.28	3.04	377%	371%
	Sub Total: HT	**7295**	**3.47**	**3.46**	**3.04**	**114%**	**114%**
	Penalties & Rebates		**-0.009**	**-0.005**			

Particulars	Sales (in MU)	Average Billing Rate at Existing Tariff (Rs./Unit)	Average Billing Rate at Proposed Tariff (Rs./Unit)	Average Cost of Supply (CoS) (Rs./Unit)	Tariff as % of avg CoS	
					At Existing Tariff	At Revised Tariff
Total	**12121**	**2.85**	**2.86**	**3.04**	**94%**	**94%**

As can be seen from the above table, the Commission has reduced the cross-subsidy between categories.

6.15 Cross-Subsidy Surcharge

The Commission has determined the cross-subsidy surcharge to be paid by the open access consumers, in accordance with its Open Access Regulations and the methodology adopted in the tariff order for FY 2007-08, as shown in the table below:

Table 6.3

Cross-subsidy surcharge for open access consumers (Rs./kWh)

Sl.	Consumer Category	EHV Consumers	HV Consumers
1	Average rate of subsidising category consumers	3.75	3.34
2	Average cost of supply	3.04	3.04
3	**Cross-subsidy surcharge**	**0.71**	**0.30**

The cross-subsidy surcharge for FY 2009-10 has been aporoved at 71 paise/kWh and 30 paise/kWh for EHV and HV respectively for consumers seeking open access.

7 TARIFF SCHEDULE

The detailed schedules of approved tariff are as given in this part.

7.1 Tariff Schedule for Low Tension (LT) Consumers

This tariff schedule is applicable to all LT consumers as follows:

a) Single-phase, 230 Volts up to a maximum connected load of 120W for BPL consumers availing supply for light and fan; and

b) Single-phase, 230 Volts up to a maximum connected load of 2 KW, and

c) Three phase, 400 volts, for maximum demand upto 75 KW in case of demand based tariff or for maximum contracted load of 100 hp in case of other tariff, as applicable.

7.1.1 LV-1: Domestic

1. Applicability

This tariff is applicable to domestic light and fan and power used for all domestic appliances, in a residential premises, orphanages, homes for old/physically handicapped people and homes for destitute; Dharamshalas; student hostels; working women's hostels; Ashrams; Schools and hospitals (including X-rays etc.) run by charitable trusts; Government hospitals/ dispensaries, (excluding private clinics and nursing homes); Government Schools; farm houses; mosques; temples; churches, gurudwars ; religious and spiritual institutions; water works and street lights in private colonies and cooperative societies; post office at residence of a villager; residential premises of advocates, doctors, artists, weavers, bidi makers, stitching and embroidery workers including their chambers; public toilets; fractional HP motors used for Shailchak by Kumhars in their residences.

2. Tariff

	Category of consumers	Unit Slab (Non-Telescopic)	Fixed Charge (In Rupees)	Energy Charge (Rs. per unit)	Minimum Fixed Charge
	LV-1: Domestic				
1.1 1.1.1 1.1.2	BPL consumers Un-metered Metered	- 0 - 30 units	Rs. 50/Connection/M Rs. 0.75 per unit	- 0.75	Nil
1.2	Other Domestic Consumers (Metered)	0 - 200 units 0 - 500 units 0 - 700 units 0 - Above 700 units	0.90 per unit 1.00 per unit 1.20 per unit 1.50 per unit	0.70 0.90 1.25 1.50	Single phase- Rs.30/- p.m. Three phase- Rs.100/- p.m.

Notes:

i. LV 1.1 tariff is applicable only to such consumers – who fulfill all of the following three conditions:-
   a. whose connected load is not more 120 Watts,
   b. whose consumption in the previous year is not more than 360 units, and
   c. who hold BPL card

ii. The existing un-metered BPL consumers shall be billed according to tariff 1.1.1 In case the connected load at any time is found more than 120 Watts, then the consumer will cease to be covered under LV tariff 1.1.1 and thereafter monthly billing shall be done according to LV tariff 1.2 and the consumption shall be assessed on 35 % load factor.

iii. If the consumption of a BPL consumer (1.1.2) exceeds 360 units in the previous year (any 12 months period) or the connected load at any time is found more than 120 Watts, then the consumer will cease to be covered under LV Tariff 1.1.2 applicable to BPL category and thereafter, billing shall be done according to LV Tariff 1.2.

iv. Once a consumer is classified under the LV Tariff 1.2, then he cannot be classified under BPL category 1.1 in future

v. If a portion of the dwelling is used for the conduct of any business other than those specified above, the entire consumption shall be billed under Non-domestic tariff LV-2

7.1.2 LV-2 Non-Domestic

1. Applicability

This tariff is applicable to light and fan and power to shops, show rooms, business houses, offices, educational institutions (except those included in LV-1 and LV-5), public buildings, town halls, clubs, gymnasium and health clubs, meeting halls, places of public entertainment, circus, hotels, cinemas, railway stations, private clinics and nursing homes, X-rays plants, diagnostic centers, pathological labs, carpenters and furniture makers, juice centres, hoardings and advertisement services, public libraries and reading rooms, typing institutes, internet cafes, STD/ISD PCO's, FAX/ photocopy shops, tailoring shops, photographers and colour labs, laundries, cycle shops, compressors for filling air, single phase toy making industry, nickel plating on small scale, restaurants, eating establishments, Government circuit houses/rest houses, guest houses, marriage gardens, book binders, petrol pumps and service stations and other consumers not covered under any other category of LT consumers.

2. **Tariff**

Category of consumers	Unit slab (Non-telescopic)	Fixed Charge on connected load	Energy charge (Rs. per unit)
LV-2.1: Non-Domestic (Normal Tariff)	0 – 100 units	**Rs. 50 / KW / month**	2.75
	0 - 500 units	**Rs. 50 / KW / month**	3.25
	0- Above 500 units	**Rs. 50 / KW / month**	3.75
LV-2.2: Non-Domestic Demand Based Tariff (for Contract demand of 15 to 75 Kw)		**Demand charges –** Rs. 125 / Kw / Month on billing demand	3.50

Note:

The tariff LV 2.2 will be optional.

Demand based tariff – 2.2 is applicable for maximum contracted demand from 15 KW to75 KW. Total connected load in this tariff shall not be more than 150 HP (112 Kw).

All existing L.T. non-domestic connections having contracted load of above 100 HP (75 Kw) and availing tariff 2.1were directed to avail H.T. supply by 31.12.2005.If they have not switched on to HT supply so far, then shall pay an additional charge @ 30 % of the total amount of monthly bill (fixed and energy charge and also VCA charge, if any)..

The Demand charge on contract demand is a monthly minimum charge whether any energy is consumed during the month or not.

7.1.3 LV-3 L.T. Agriculture

1. **Applicability**

This tariff is applicable to agricultural pumps / tube wells used for irrigation (including drip and sprinkler system) for crops, nursery, horticulture crops (growing vegetables and fruits), floriculture (growing flowers), growing of herbs/medicinal plants and mushroom, jatropha plantation, chaff cutters, winnowing machines, sugarcane crushers used on agricultural land, lift irrigation pumps / tube wells of State Government or its agencies; water drawn by agriculture pumps used by labour, cattle, and farm houses in the premises of agriculture farms for drinking purposes only.

1. Tariff

	Category of consumers	Fixed Charge	Energy Charge (Rs. per unit)
	LV-3: L.T. Agriculture		
3.1	Metered Supply	Rs. 20 /HP / Month	1.00
3.2	Flat Rate Supply Upto 3 HP	Rs. 65 / HP / Month	Nil

One 40W incandescent bulb/CFL of appropriate wattage not exceeding 20 W is permitted at or near the motor pump set in the power circuit.

Notes:

i) Existing connections up to 3 HP load shall have the option of being billed on actual consumption in meter or on flat rate.

ii) All existing connections above 3 HP load not provided with meters so far, the monthly billing of such consumer shall be done according to LT tariff 3.1 for consumption assessed on 25% load factor.

iii) All new agriculture connections shall be served only with meters and connections above 3 HP load shall be billed on the basis of actual consumption recorded in the meter as per L.T. tariff 3.1.

iv) All new connections of above 3 HP shall be served only after installation of capacitor of specified rating to maintain power factor of 0.85 & above.

v) All existing metered connections of above 3 HP load not provided with capacitors of specified rating and who do not maintain power factor of 0.85 and above shall be required to pay surcharge of 30 paise per unit.

vi) In respect of existing unmetered irrigation connection above 3 HP load not provided with capacitor of specified rating shall be required to pay surcharge at the rate of 30 paise per unit for consumption assessed at load factor 25%.

7.1.4 LV- 4 L.T. Agriculture Allied Activities

1. Applicability

This tariff is applicable to pump / tube well connections, other equipments and light and fan for tree plantation, fisheries, hatcheries, poultry farms, dairy, cattle breeding farms, sericulture, tissue culture and aquaculture laboratories milk chilling plant and food processing units

2. Tariff

Category of consumers	Fixed Charge	Energy Charge (Rs. per unit)
LV-4: L.T. Agriculture allied services	Rs 40 per HP per month or Rs. 54 per KW per month	2.40

Note:

i) All connections shall be required to maintain average monthly power factor of 0.85 by providing capacitors of suitable rating, failing which they shall be required to pay surcharge of 30 paise per unit.

7.1.5 LV-5 L.T . Industry

1. Applicability

These tariffs are applicable to light and fan and power for industries such as, flour mills, hullers, grinders for grinding masala, power looms, rice mills, dall mills, oil mills, ice factories, cold storage plants, ice candies; laboratories of engineering colleges, ITIs and polytechnics and industrial institutions; and workshops etc**.**

2. Tariff

	Category of consumers	Fixed Charge	Energy Charge (Rs. per unit)
LV-5: L.T. Industry			
5.1	Flour mills, Hullers, power looms, grinders for grinding masalas up to 15 HP	Rs.20/HP/ Month	2.00
5.2	**Other Industries**		
5.2.1	Up to 25 HP	Rs.50/HP/Month	2.50
5.2.2	Above 25 HP up to 100 HP	Rs.80/HP/Month	3.00
5.3	**Demand based Tariff** - for contract demand of ***15 to 75 KW***	**Demand charges-** Rs.125 /KW/Month on Billing Demand	3.00

Notes:

i) Consumers having contracted load above 100 HP (75 KW) were required to avail H.T. supply by 31.12.2005. Such consumers, who have not yet changed over to HT connection shall be billed 30% additional charges on tariff 5.2.2 till they switch over to HT connection.

ii) Demand based tariff – 5.3 is applicable for maximum contracted demand from 15 KW to 75 KW. Total connected load in this tariff shall not be more than 150 HP(112 Kw)

iii) The Demand charge on contract demand is a monthly minimum charge whether any energy is consumed during the month or not.

7.1.6 LV-6 Public Utilities

1. Applicability

These tariffs are applicable to public utilities such as water supply schemes, sewage treatment plants and sewage pumping installations, crematorium, traffic signals and lighting of public streets including public parks and archaeological and other monuments when requisition for supply is made by Public Health Engineering Department, local bodies, Gram Panchayats or any organization made responsible by the Government to maintain these services.

2. Tariff

Category of consumers	Fixed charge	Energy charge (Rs. per unit)
LV-6: Public utilities Public street light and water works	Rs. 30 /HP/Month or Rs. 40 /KW/Month	1.75

7.1.7 LT Temporary Supply

1. Applicability

This tariff is for connections of temporary nature. The applicability shall be as given in the respective category rate schedule.

Temporary supply cannot be demanded by a prospective consumer as a matter of right but will normally be arranged by the licensee when a requisition is made giving due notice subject to technical feasibility.

2. Tariff

Fixed charge and energy charge to be billed at one and half times the normal tariff as applicable to the corresponding consumer categories.

Notes:

i) Energy charge is payable in advance for estimated energy consumption of 3 months or the period of temporary connection, whichever is lower; before serving the temporary connection subject to replenishment from time to time and adjustment in the last bill after disconnection.

ii) No temporary connection including agricultural connections shall be served without a meter. Agricultural connections shall be billed one and half times of metered supply tariff (LV-3.1).

iii) Any change in VCA charges (applicable, if any) with retrospective effect, shall not be applicable to the consumers of this category after disconnection.

iv) Connection and disconnection charge shall be paid as per the schedule of miscellaneous charges.

v) Variable cost adjustment charge, if any, shall be levied at one and half times the prevailing rate in addition to above rates.

vi) No rebates/concessions under any head shall be applicable to temporary connections.

vii) A month for the purpose of billing of temporary supply shall mean 30 days from the date of connection or part thereof

viii) In case connected load / maximum demand is found more than contracted load/contract demand, then the billing of excess load/supply shall be done @ 1.5 times of the amount calculated as per the clause 7.1.8 (7) of the terms & conditions of LT tariff..

ix) Any expenditure made by the licensee for providing temporary supply upto the point of supply, shall be paid for by the consumer as per prescribed procedure.

x) Temporary connections shall not be served unless suitable capacitors, wherever applicable, are installed so as to ensure power factor of not less than 0.85 lagging.

xi) Surcharge at the rate of 2% per month or part thereof on the outstanding amount of the bill shall be payable in addition, from the due date of bill, if the bill is not paid by the consumer within the period prescribed

7.1.8 Terms and Conditions of L.T. Tariff

1. Energy will be supplied to the consumer ordinarily at a single point for the entire premises of the consumer.
2. No new L.T. connection above 75 KW of contract demand /100HP of contracted load shall be served. However the connected load in demand-based tariff shall not be more than 150 HP.

3. All existing L.T. connections with contracted load above 100HP which have not availed H.T. supply so far, shall be levied 30 % additional charge on the tariff of LV-2.1 or LV- 5.2.2 (whichever is applicable) on total amount of monthly bill comprising fixed charge/demand charge, energy charge, minimum charge and VCA charge, if any.
4. Contracted load/ connected load or contact demand /maximum demand in fraction shall be rounded off to the next whole number.
5. For the purpose of Demand Based Tariff (LV 2.2 & LV 5.3)
   i) ***Determination of Maximum Demand*** - The maximum demand of the consumer in each month shall be twice the largest amount of Kilo Watt hours delivered at the point of supply of the consumer, during any consecutive thirty minutes, in that month.
   ii) ***Billing Demand –*** The billing demand for the month shall be the actual maximum KW demand of the consumer recorded during the month or 75% of the contract demand or 15 KW, whichever is higher. The billing demand shall be rounded off to the nearest integral figure, the fraction of 0.5 or above will be rounded to the next higher figure and the fraction of less than 0.5 shall be ignored.
   iii) ***Minimum Charge*** – The demand charge on contract demand (CD) is a monthly minimum charge whether any energy is consumed during the month or not.

6. Power Factor Incentive and Surcharge

a) All LT industrial, agriculture allied, agriculture and public water works consumers whose contracted load /connected load is **above 3 HP** shall arrange to install low tension suitable capacitors of appropriate capacity at their cost. The consumer also shall ensure that the capacitors installed by him are properly match with the actual requirement of the load so as to ensure average monthly power factor of 85% or above. A consumer who fails to do so shall be liable to pay power factor surcharge @ 30 (thirty) paise per unit on the entire consumption of the month.

b) All LT **domestic,** non-domestic consumers with contracted load/connected load of 15 ***KW*** or above, shall arrange to install low tension suitable capacitors of appropriate capacity at their cost. The consumer shall ensure that the capacitors installed by him are properly match with the actual requirement of the load so as to ensure average monthly power factor of 85% or above. A consumer who fails to do so will be liable to pay low power factor surcharge @ 30 (thirty) paise per unit on the entire consumption of the month.

c) All LT installations having welding transformer are required to install suitable capacitor(s) so as to ensure power factor of not less than 85%. Consumers not complying with the above shall have to pay surcharge of 75 (seventy-five) paise per unit on the entire monthly consumption, provided the load of the welding transformer(s) exceeds 25% of the total connected load

Note . - For the purposes of computing the connected load in KW / HP of welding transformers, a power factor of 0.6 shall be applied to the KVA rating of such welding transformers. The KVA rating can also be calculated on the basis of no load voltage and maximum full load current of welding machine

d) The average monthly power factor recorded in the meter shall be considered for billing of power factor surcharge or power factor incentive, as the case may be.

e) Levy of power factor surcharge as indicated above, shall be without prejudice to the rights of the CSPDCL to disconnect the consumer's installation after issue of 15 day's notice if the average monthly power factor remains 0.7 or below for a period of more than two consecutive months. It shall remain disconnected till the consumer makes suitable arrangements to improve the power factor to the satisfaction of the CSPDCL.

f) All categories of LT consumers in whose case power factor surcharge is applicable; shall also be eligible for power factor incentive. Such incentive shall be payable @ of **10 paise** per unit on the entire consumption of that month in which he maintains an average monthly power factor equal or above 90% and @ **20 paise** per unit of entire consumption of that month in which he maintains an average monthly power factor 95% or above.

g) A period of three months be allowed to install capacitors to the consumers for whome installation of capacitor have been made compulsory in this tariff, and thus the panel provision will be applicable w.e.f. October 1, 2009.

7. Provisions of billing in case of Excess Supply

I. For Normal Tariff consumers

In case the connected load or the maximum demand of any LT consumer, except the domestic and demand based tariff consumers, is found at any time in excess of contracted load, the consumer shall have to pay charges at tariff (fixed and energy charge including minimum charge) corresponding to the excess load at the rate of one and half times the normal tariff (inclusive of variable cost adjustment charge, if any), for a maximum period of previous **six** months, including the month in which the existence of excess load is detected and shall be continued to be billed till excess load is removed or contract load is enhanced.

II . **For Demand Based tariff consumers**

Consumers availing supply at demand based tariff (LV-5.3 / LV- 2.2.) should at all times restrict their maximum demand to the contract demand. In case the maximum demand in any month exceeds the contract demand, the said demand based tariff (LV–5.3/ LV- 2.2) shall apply only to the extent of the contract demand and corresponding units of energy. The demand in excess of contract demand and corresponding units of energy shall be treated as excess supply The excess supply so availed, in any month, shall be charged at the rate of <u>one and half times</u> the normal tariff applicable to the consumer and while doing so, other terms and conditions (viz. tariff minimum, variable cost adjustments charge , etc.) of tariff shall also be applicable on the said excess supply. For the purpose of billing of excess supply, the billing demand and the units of energy shall be determined as under:

a) Billing demand: The demand in excess of the contract demand in any month shall be the billing demand.
b) Units of Energy: the units of energy corresponding to KW portion of the demand in excess of the contract demand shall be:-

$$EU = TU \left(1- \frac{CD}{MD}\right)$$

EU – denotes excess units;
TU – denotes total units supplied during the month;
CD – denotes contract demand, and
MD – denotes actual maximum demand.

III. The excess supply availed in any month shall be charged along with the monthly bill and shall be payable accordingly.

IV. The above billing of excess supply at one and half times the normal tariff, shall be applicable to consumers without prejudice to the CSPDCL's right to discontinue supply in accordance with the provisions contained in the Chhattisgarh State Electricity Supply Code.

8. Delayed Payment Surcharge

If the bill is not paid by the consumer within the period (due date) prescribed for payment of the bill, a surcharge @ 1.5% per month or part thereof, on the total outstanding amount of the bill (including arears, if any, but excluding amount of surcharge), subject to minimum of Rs. 5 shall be payable in addition, from the due date of payment as mentioned in the bill.

9. Advance Payment Rebate –

A rebate @ 0.5% per month will be payable on net amount of advance at the end of the billing cycle of that particular month, subject to the net amount of advance is not less than Rs.100, and shall be adjustable in next month's bill.

10. Rounding off

The bill shall be rounded off to the in nearest multiple of Rs.10. Difference, if any, between the bill amount before and after rounding off, shall be adjusted in next month's bill.

For example:- If the total amount of bill is Rs. 235.00, then the bill shall be rounded off to Rs. 240 and Rs. 5.00 will be credited in next month's bill Whereas if the total amount of bill is Rs. 234.95, then the bill will be rounded off to Rs. 230 and Rs. 4.95 will be debited in next month's bill .

In view of the above provision no surcharge will be leviable on outstanding amount which is less than Rs. 10.

11. Applicability of tariff

In case of any dispute about applicability of tariff to a particular LT category, the decision of the Commission shall be final and binding.

12. VCA Charge

Variable Cost Adjustment charge, if any, shall be levied in addition to energy charge on all the categories except agriculture and BPL domestic consumers.

13. Tax or Duty

The tariff does not include any tax or duty, etc. on electrical energy that may be payable at any time in accordance with any law in force. Such charges, if any, shall be payable by the consumer in addition to tariff charges.

14. **Meter Hire**

Meter hire shall be charged as per the schedule of miscellaneous charges to all categories of LT consumers except the consumers of domestic light and fan category. Domestic light and fan category consumer shall not required to pay such charges

15. All the above conditions of tariff shall be applicable to the consumer notwithstanding the provisions, if any, in the agreement entered into by the consumer with the licensee, to the contrary.

7.2 Tariff Schedule for Extra High Tension (EHT) Consumers

This tariff schedule is for consumers who avail supply at EHV i.e at 400/220/132 KV.

7.2.1 EHV-1: Railway Traction

1. Applicability

This tariff is applicable to the Railways, for traction loads only, availing two-phase supply.

2. Tariff

Category of consumer	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KVAh)
EHV-1:Railway Traction	300	2.60

3. Determination of Demand

The maximum demand of the supply in each month shall be four times the largest number of Kilo Volt Ampere hours (KVAh) delivered at the point of supply during any consecutive 15 minutes in the month as per the sliding window principle of measurement of demand.

Provided that if as a result of an emergency in the consumer's installation or in the transmission lines supplying energy to the said traction sub-station, extra load is taken by the consumer with prior intimation to the licensee, the period of such emergency shall not be taken into account for the purpose of working out the maximum demand.

Provided further that as a result of emergency in the traction sub-station (TSS) or in the transmission line supplying power, if the entire load of the TSS or part thereof is transferred to adjacent TSS, the maximum demand (MD) of the TSS, for the month shall not be taken as less than the average MD recorded for the previous three months during which no emergency had occurred.

4. The conditions of power factor incentive/penalty shall not be applicable as the energy charges are billed on KVAh.

7.2.2 EHV-2: Heavy Industries

1. Applicability

This tariff is applicable to the industries with a contract demand of above 20 MVA for power, lights, fans, etc. which shall mean and include all energy consumption in factory; and consumption for residential and general use therein.

2. Tariff

Category of consumers	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KWh)
EHV-2: HEAVY INDUSTRIES	300	3.05

3. Determination of Demand

The maximum demand in each month shall be four times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 15 minutes during the month as per sliding window principle of measurement of demand.

7.2.3 EHV-3 Steel Industries

1. Applicability

This tariff is applicable to steel industries having contract demand upto 20 MVA, such as mini steel plants, rolling mills, sponge iron plants, ferro alloy units, steel casting units, wire drawing units with or without galvanizing unit, and combination thereof; for power, lights, fans, etc. which shall mean and include all energy consumption in factory and consumption for residential and general use therein.

2. Tariff

Category of Consumers	Demand Charges (Rs./KVA/month)	Energy Charges (Rs./KWh)
EHV- 3: Steel	300	2.25

Industries		

3. **Determination of Demand**

The maximum demand of the supply in each month shall be four times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 15 minutes in the month as per sliding window principle of measurement of demand.

7.2.4 EHV-4: Other EHV Consumers

1. **Applicability**

This tariff is applicable to coal mines, mines, cement industries and all other EHV consumers which are not covered under any other EHV tariff category for power, lights, fans, etc. which shall mean and include all energy consumption in factory; and consumption for residential and general use therein.

2. **Tariff**

Category of consumers	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KWh)
EHV-4: other EHV consumers	300	3.30

3. **Determination of Demand**

The maximum demand of the supply in each month shall be four times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 15 minutes during the month as per sliding window principle of measurement of demand.

7.3 Tariff Schedule for High Tension (HT) Consumers

This tariff schedule is for consumers who avail supply at 33 or 11 KV.

HV-1 Steel Industries

1. **Applicability**

This tariff is applicable to steel industries such as mini steel plants, rolling mills, sponge iron plants, Ferro alloy units, steel casting units, wire drawing units with or without galvanizing unit and combination thereof; for power, lights, fans, etc. which shall mean and include all energy consumption in factory and consumption for residential and general use therein.

2. Tariff

Category of Consumers	Demand Charges (Rs./KVA/month)	Energy Charges (Rs./KWh)
HV-1.1: Steel Industries at 33 KV	310	2.30
HV-1.2: Steel Industries at 11 KV	320	2.40

3. Determination of Demand

The maximum demand of the supply in each month shall be four times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 15 minutes in the month as per sliding window principle of measurement of demand.

4. Load factor Incentive

If the load factor is over 70%, a load factor incentive of 15 paise /unit on the entire consumption shall be allowed. For calculating load factor for the purpose of load factor incentive, average power factor of 0.9 or actual average monthly power factor, whichever is higher; shall be taken and when the maximum demand is more than the contract demand in any month, then maximum demand shall be taken for calculation of load factor for the purpose of load factor incentive, in place of contract demand.

7.3.1 HV-2: Mines and Cement Industries

1. Applicability

This tariff is applicable to the mines, coal mines and cement industries for power, lights, fans, etc. which shall mean and include all energy consumption in factory and consumption for residential and general use therein.

2. Tariff

Category of consumers	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KWh)
HV-2.1: Mines and Cement Industries at 33 KV	310	3. 35
HV-2.2: Mines and Cement Industries at 11 KV	320	3.45

3. Determination of Demand

The maximum demand in each month shall be four times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 15 minutes during the month as per sliding window principle of measurement of demand.

7.3.2 HV-3: Other H.T. Industries

1. Applicability

This tariff is applicable to all other industries not covered under categories HV-1, HV-2 and HV-4 for power, lights, fans, etc. which shall mean and include all energy consumption in factory and consumption for residential and general use therein.

2. Tariff

Category of consumers	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KWh)
HV 3.1: Other H.T. Industries at 33 KV	310	2.80
HV 3.2: Other H.T. Industries at 11 KV	320	2.90

3. Determination of Demand

The maximum demand of supply in each month shall be two times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 30 minutes during the month as per sliding window principle of measurement of demand. However, for fluctuating loads of industries such as electro-chemical, electro-thermal and gas manufacturing units etc., the maximum demand for supply in each month shall be four times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 15 minutes during the month as per sliding window principle of measurement of demand.

7.3.3 HV-4: Low Load Factor Industries

1. Applicability

This tariff is applicable to all such HT industries to whom tariff category HV-1 and HV-3 apply and working in day time only i.e.. between 6:00 A.M. and 6:00 P.M., as an optional tariff ; for power, lights, fans, etc. which shall mean and include all energy consumption in factory and consumption for residential and general use therein.. This tariff will be applicable to a consumer who opts for it

2. Tariff

Category of consumers	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KWh)
HV 4.1: Low load factor industries at 33 KV	155	3.20
HV 4.2 : Low load factor industries at 11 KV	160	3.30

3. Determination of Demand

The maximum demand of supply in each month shall be four times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 15 minutes in the month as per sliding window principle of measurement of demand.

4. Conditions for low load factor industries

i) This tariff is applicable to HT industries, which use power during daytime between 6:00 A.M. and 6:00 P.M. In case, they draw power beyond the time specified, the energy consumed shall be charged at one hundred and thirty percent (1.3 times) of the normal rate of energy charge applicable to the consumer.

ii) For the purpose of billing of additional energy charge, the CSPDCL/ licensee shall ensure installation of time of day meter.

iii) The supply availed beyond specified period in any month shall be charged alongwith the monthly bill and shall be payable by the consumer.

7.3.4 HV-5: Residential Purpose

1. Applicability

This tariff shall be applicable primarily for bulk supply at one point to colonies, multistoried residential buildings, townships, including townships of industries .

2. Tariff

Category of consumers	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KWh)
HV 5.1: Residential at 33 KV	310	2.25
HV 5.2 : Residential at 11 KV	320	2.35

3. **Determination of Demand**

The maximum demand of supply in each month shall be two times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 30 minutes in the month as per sliding window principle of measurement of demand.

7.3.5 HV-6: General Purpose Non-Industrial

1. **Applicability**

This tariff is applicable for supply to establishment such as Railways (other than traction), hospitals, offices, hotels, shopping malls, educational institutions, other institutions etc. having mixed load or non-industrial and/or non-residential load. This tariff is also applicable to all types of construction load and all other HT consumers not covered specifically in any other HV tariff category.

2. **Tariff**

Category of consumers	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KWh)
HV 6.1: General Purpose Non-Industrial at 33 KV	310	3.25
HV 6.2: General Purpose Non-Industrial at 11 KV	320	3.35

3. **Determination of Demand**

The maximum demand of supply in each month shall be two times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 30 minutes in the month as per sliding window principle of measurement of demand.

7.3.6 HV-7: Public Water Works and Irrigation

1. **Applicability**

This tariff is applicable to public utility water supply schemes, sewerage treatment plants and sewerage pumping installations run by P.H.E. Department, local bodies, Gram Panchayat or any organization made responsible by the Government to supply/maintain public water works/ sewerage installation including energy used for lighting pump house. This tariff is also applicable to agriculture pump connections, irrigation pumps of lift irrigation schemes of State Government or its agencies/co-operative societies, including energy used for lighting pump house.

2. Tariff

Category of consumers	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KWh)
HV 7.1: Public Water Works and Irrigation at 33 KV	155	2.00
HV 7.2: Public Water Works and Irrigation at 11 KV	160	2.10

3. Determination of Demand

The maximum demand of supply in each month shall be two times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 30 minutes during the month as per sliding window principle of measurement of demand.

7.4 HV-8 : Start-Up Power Tariff

1. Applicability

The tariff shall be applicable to those consumers who avail supply for start-up of generators at 400/220/132/33/11 KV..

2. Tariff

Category of consumers	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KWh)
HV-8 : Start-up power tariff	150	3.20

3. Determination of Demand

The maximum demand of supply in each month shall be four times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 15 minutes during the month as per sliding window principle of measurement of demand.

4. Conditions for start-up power consumers-

i) Contract demand shall not exceed 10% of the capacity of the highest capacity generating unit of the generating station.

ii) Drawal of power shall be restricted to within 10% of load factor in each month. In case the load factor in a month is recorded beyond 10 %, the demand charge shall be charged at double the normal rate. Supply can also be disconnected if the monthly load factor exceeds 10% in any two consecutive months.

7.5 HV-9 : Agriculture Allied Activities

1. Applicability

This tariff is applicable to the consumer availing supply at HV for the purpose of pump / tube well connections, fisheries, hatcheries, poultry farms, dairy, cattle breeding farms, sericulture, tissue culture and aquaculture laboratories and food processing industries for power, lights, fans, coolers, etc. which shall mean and include all energy consumed in factory, offices, stores, canteen, compound lighting, etc. and residential use therein

2. Tariff

Category of consumers	Demand charge (Rs./KVA/month)	Energy charge (Rs. per KWh)
HV 9.1: Agriculture allied activities at 33 KV	310	2.60
HV 9.2: Agriculture allied activities at 11 KV	320	2.70

3. Determination of Demand

The maximum demand of supply in each month shall be four times the largest number of Kilo Volt Ampere hours delivered at the point of supply during any consecutive 30 minutes in the month as per sliding window principle of measurement of demand.

7.6 Temporary Connection at EHV and HV

1. Applicability

This tariff is applicable to all EHV and HV connections other than the consumers availing Start up power Tariff (HV-8)], of temporary nature at 220/132/33/11 KV.

2. Tariff

One and half times of the normal Tariff applicable for that category with demand, energy and VCA charge.

Notes:

i) An amount equal to estimated bill for 3 months or for the period requisitioned, whichever is less; is payable in advance before the temporary connection is served subject to replenishment from time to time and adjustment in the last bill after disconnection.

ii) If maximum demand is found more than the contract demand in any billing month, the billing shall be done at one and half times of the energy charges, Demand charges etc. as applicable in case of exceeding contract demand in permanent connection, and shall be calculated as per clause 10 of terms & conditions of EHV and HV tariff.

iii) Any change in VCA charge (if any) with retrospective effect, shall not be applicable to the consumer of this category, after disconnection.

iv) Any expenditure made by the CSPDCL/licensee up to the point of supply for giving temporary connection shall be payable by the consumer as per prescribed procedure.

v) Connection and disconnection charges shall be paid separately.

vi) No rebates/concessions under any head shall be applicable to temporary connections.

vii) Month for the purpose of billing of temporary supply shall mean 30 days from the date of connection or for part thereof.

viii) Other terms and conditions of the relevant category of tariff shall also be applicable except load factor incentive.

ix) Surcharge at 2% per month or part there of on the outstanding amount of the bill shall be payable in addition from the due date of bill, if the bill is not paid by the consumer within the period prescribed.

x) Temporary connection shall not be served unless suitable capacitors are installed by the consumer so as to ensure power factor of not less than 0.90.

7.7 Time of Day Tariff

This tariff is applicable to all HT industrial consumers. Under the Time of Day (TOD) Tariff, electricity consumption and maximum demand in respect of HV industries for different periods of the day, i.e. normal period, peak load period and off-peak load period, shall be recorded by installing a TOD meter. The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer:

Period of Use	Normal rate of Demand Charge Plus
(i) Normal period (5:00 a.m. to 6:00 p.m.)	Normal rate of Energy Charges
(ii) Evening peak load period (6:00 p.m. to 11:00 p.m.)	130% of normal rate of Energy Charge
(iii) Off-peak load period (11:00 p.m. to 5:00 a.m of next day)	85 % of normal rate of Energy Charge

Applicability and Terms and Conditions of TOD tariff:

i) TOD tariff is applicable to all EHV and HV industries covered in EHV-2, EHV-3, EHV-4, HV-1, HV-2 and HV-3 categories.

ii) The terms and conditions of the applicable tariff (such as monthly tariff minimum charge, etc.) shall continue to apply to a consumer to whom TOD tariff is applicable

iii) In case, the consumer exceeds the contract demand, the demand in excess and the corresponding energy shall be billed at one and half times of the normal tariff applicable for the day time (i.e., 5.00 a.m. to 6.00 p.m.) irrespective of the time of use.

7.8 Terms and Conditions of EHV and HV Tariff

1. The maximum and minimum contract demand for different supply voltage are applicable for loads with contract demand as below:

Supply Voltage	Minimum	Maximum
11 KV	60 KVA	300 KVA
33 KV	60 KVA	10 MVA
132 KV	4 MVA	40 MVA
220 KV	15 MVA	150 MVA

Deviation in contract demand,if any, in respect of the above provisions on account of technical reasons may be permitted with the approval of the Commission and billing shall be done accordingly.

2. Point of Supply

Power will be supplied to consumers ordinarily at a single point for the entire premises. In certain categories like coal mines, power may be supplied at more than one point on the request of consumer subject to technical feasibility. But in such a case, metering and billing will be done separately for each point of supply.

3. Billing demand

The billing demand for the month shall be the maximum demand (in KVA) of the consumer recorded during the billing month or 75% of the contract demand or Minimum demand prescribed in above clause 7.8.1, for the corresponding supply voltage, whichever is higher. The billing demand shall be rounded off to the nearest integral figure, the fraction of 0.5 or above will be rounded to the next higher figure and the fraction of less than 0.5 shall be ignored.

4. Minimum Charge

The demand charge on contract demand (CD) is a monthly minimum charge whether any energy is consumed during the month or not.

5. Power Factor Incentive / Surcharge

a) If the average monthly power factor of the consumer increases above 95%, he shall be paid an incentive at the following rate :

For each one percent increase by which his average monthly power factor is above 95%, upto unity power factor	-	One percent (1%) of the total amount of the bill under the head 'energy charge'

b) If the average monthly power factor of the consumer falls below 90%, he shall pay a surcharge in addition to his normal tariff, at the following rate:

For each one percent by which his average monthly power factor fallsbelow 90% upto 85%	-	One percent (1%) of the total amount of the bill under the head 'energy charge'

c) If average monthly power factor of the consumer falls below 85%, he shall pay a surcharge in addition to his normal tariff at the following rate :

For each one percent by which his average monthly power factor falls below 85%	-	Two percent (2%) of the total amount of the bill under the head 'energy charge'

d) If the average monthly power factor of the consumer falls below 70%, then the CSPDCL shall have the right to disconnect supply to consumer's installation after serving a notice of 15 days. Supply may be restored only after steps are taken to improve the power factor to the satisfaction of the CSPDCL / licensee. This is, however, without prejudice to the levy of surcharge for low power factor in the event of supply not being disconnected.

e) For this purpose, the "average monthly power factor" is defined as the ratio of total 'Kilo Watt hours' to the total 'Kilo Volt Ampere hours' recorded during the month. This ratio will be rounded off to two figures after decimal, 5 or above in the third place after decimal being rounded off to the next higher figure in the second place after decimal.

f) Notwithstanding the above, if the average monthly power factor of a new consumer is found to be less than 90% at any time during the first 6 (six) months from the date of connection, and if he maintains the average monthly power factor in subsequent three months at not less than 90%, then the surcharge billed on account of low power factor during the said period, shall be withdrawn and credited in next month's bill

6. VCA Charge

Variable cost adjustment (VCA) charge, if any, shall be levied in addition to energy charge.

7. Rounding off

The amount of HT energy bill shall be rounded off to the nearest multiple of Rs.10.

for Example - the amount of Rs. 12345 will be rounded off to Rs.12350 & Rs. 12344.95 shall be rounded ff to Rs. 12340.

In view of the above provision no surcharge will be leviable on outstanding amount which is less than Rs. 10.

8. Delayed Payment Surcharge

If the bill is not paid by the consumer within the period prescribed (due date) for payment of the bill, a surcharge @ 1.5% per month or part thereof, on the total outstanding amount of the bill (including arears, if any but excluding amount of surcharge), shall be payable in addition, from the due date of payment as mentioned in the bill.

9. Advance Payment Rebate -

A rebate @ 0.5% per month will be payable on net amount of advance at the end of the billing cycle of that particular month, subject to the net amount of advance is not less than Rs.100, and shall be adjustable in next month's bill.

10. Additional Charge for Exceeding Contract Demand

The consumers should restrict their maximum demand to the contract demand. In case the maximum demand in any month exceeds the contract demand, the foregoing tariffs shall apply only to the extent of the contract demand and corresponding units of energy. The demand in excess of contract demand and corresponding units of energy shall be treated as excess supply. The excess supply so availed, if any, in any month shall be charged at one and half times of the normal tariff applicable to the consumer and while doing so other provisions of electricity tariff (such as tariff minimum charge, low power factor charge, etc.) will also be applicable on aforesaid excess supply, unless otherwise provided specifically for any category.

For the purpose of billing of excess supply, the billing demand and the units of energy shall be determined as under:-

i. **Billing Demand / Contract Demand:**
The demand in excess of the contract demand in any month shall be the billing demand/ contract demand of the excess supply.

ii. **Units Energy:**
The units of energy corresponding to KVAs of the portion of the demand in excess of the contract demand shall be:

$$EU = TU \left(1 - \frac{CD}{MD} \right)$$

Where,

EU -denotes units corresponding to excess supply;
TU-denotes total units supplied during the month;
CD-denotes contract demand; and
MD- denotes maximum demand.

The excess supply availed in any month shall be charged alongwith the monthly bill and shall be payable by the consumer.

The billing of excess supply at one and half times of the normal tariff applicable to consumer is without prejudice to the Board's right to discontinue the supply in accordance with the provisions contained in the Chhattisgarh State Electricity Supply Code.

iii. No rebates/incentive is payable on such excess supply.

11. Additional Charge
The existing consumers having contract demand exceeding the maximum limit as prescribed in clause 7.8 (1) with the approval of competent authority, shall be levied additional charges at the rate of 5% on energy charges of the respective consumer category.

12. Meter Hire
Meter hire shall be charged as per the schedule of miscellaneous charges to all categories of HT consumers

13. Tax or Duty

The tariff does not include any tax or duty, etc. on electrical energy that may be payable at any time in accordance with any law / State Government Rules in force. Such charges, if any, shall be payable by the consumer in addition to tariff charges.

14. Dispute on applicability of tariff

In case of any dispute on applicability of tariff on a particular category of HT industry/ consumer, the decision of the Commission shall be final and binding.

15. Notwithstanding the provisions, if any, contrary to the agreement entered into by the consumer with the Board/ licensee, all conditions prescribed herein shall be applicable to the consumer.

7.9 Parallel Operation Charges (POC)

Parallel operation charges for CPPs shall be payable at the rate, as fixed by the Commission in its order passed on dated 31.12.2008 in petition No. 39 of 2006 (M), till revised by the Commission

7.10 Open Access Charges:

The Commission vide order dt. 15.02.2006 passed in petition no. 03/2006(M), had determined open access charges for the first time. Subsequently, these charges were revised in Tariff order for FY 2006-07 and FY 2007-08. The following charges are approved by the Commission for the year 2009-10.

(a) Transmission Charges	i) 5 % in kind which will be deducted from the energy input ii) Rs. 72115 per MW or part thereof per month for long-term open access; and Rs. 593 per MW or part thereof per day for short-term open access.
(b) Wheeling Charges	i) 6 % in kind which will be deducted from the energy input at 33 KV. ii) 17 paise/ Unit in cash.
(c) Operating Charges	Rs. 2000 day or part thereof.

(d) Reactive Energy Charges 27 paise/ KVARh

(e) Cross Subsidy Surcharge i) For EHT consumers 71 paise/unit
ii) For HT consumers 30 paise/unit

7.11 Schedule of Miscellaneous and General Charges

The miscellaneous and general charges applicable presently are given as below, subject to revision by the commission from time to time:-

Sl. No	Particulars	Approved Charges effective from 1.9.2007
A.	**Meter Hire Charges (Not applicable for domestic consumers)**	**(Per Month)**
1.	Single phase meters	Rs. 10/-
2.	3- Phase LT meters	
a.	10-40 Amp meters	Rs. 25/-
b.	20-100 Amp meters	Rs 50/-
3.	3 Phase LT CT meter	Rs. 70/-
4.	11 KV Metering System	Rs. 720/-
5.	33 KV Metering System	Rs. 1,140/-
6.	132 KV Metering System	Rs. 8,900/-
7.	220 KV Metering System	Rs. 19, 600/-
B.	**Other work oriented jobs**	
1.	**Shifting of meter/meter board in the same premises.** (Even at the consumer's request)	Rs. 70/-
2.	**Re-sealing of cut outs provided on meter board in the consumer's premises, if seal is found broken.**	Rs. 25/-
3.	**Replacement of fuses/meter reading card**	
a)	Replacing consumer's cut out fuses (LT)	Rs. 25/-
b)	Replacement of missing meter reading card.	Rs. 10/-

Sl. No	Particulars	Approved Charges effective from 1.9.2007
4.	**Disconnection/Reconnections**	
a)	Single phase LT connection	Rs. 60/-
b)	3-phase LT connection upto 25 HP/19KW	Rs. 150/-
c)	3-phase LT connection above 25 HP/19KW	Rs. 500/-
d)	HT Connection upto 5 MVA	Rs. 1750/-
e)	HT Connection above 5 MVA	Rs. 2500/-
5.	**Re-rating / checking of installation / equipment done at the request of the consumer**.	
a)	Single phase connection	Rs. 150/-
b)	Three phase connection	Rs. 300/-
6.	**Testing of installations** For the subsequent testing of installation, or testing of an extension to the existing installation, or if the wiring contractor or his representative fails to be present during initial testing of a new installation or subsequent testing	Rs. 200/-
C.	**Testing Charges**	
1	Single Phase meter	Rs. 130/-
2	3 Ph, 4 Wire meter, without CT	Rs. 200/-
3	LT CT (Each)	Rs. 170/-
4	3 Ph, 4 Wire meter, with CTs	Rs. 880/-
5	Tri-vector meter	Rs. 1200/-
6	33/11 KV metering equipment	Rs. 2680/-
7	132/220 KV metering equipment	Rs. 3750/-
8	O/C, E/F Relay per element testing	Rs. 400/-
9.	BDV	Rs. 320/-
10.	HT CT (Ratio, polarity, IR, BDV) each unit	Rs. 1000/-
11.	ABT Meter	Rs. 9310/-
D.	**Additional charges for testing at site**	
1.	Equipment tested at site, the site being located at the Head Quarter of the MRT Division.	Rs. 800/- per day or part thereof and the transport charges for the work on actual basis.

Sl. No	Particulars	Approved Charges effective from 1.9.2007
2.	Equipments tested at site, the site being located away from H.Q of E.E. (MRT)	Rs. 800/- per day or part thereof and transport charges along with TA and DA admissible to the staff involved. The counting of days shall be from the starting of journey till the return from the journey for the work on actual basis.
E.	**Contest Fee**	
1.	LT Meter	1.5 times of testing charges
2.	HT Meter	2 times of testing charges
F.	**Special Meter Reading**	
1.	L.T. Connection	Rs. 25/-
2.	H.T. Connection	Rs. 250/-
3.	Surcharge for inaccessibility of meter for reading as per notice	LT: Rs.25/- HT: Rs. 250/-
G.	**Replacement of Burnt Meter**	Cost of Burnt Meter
H.	SUPERVISION CHARGES FOR SERVICE CONNECTION AND OTHER WORKS	
1.	Single Phase	Rs. 200/-
2. (i) (ii)	Three phase Connected load upto 25 HP Connected load above 25 HP	 Rs. 365/- Rs. 510/-
3.	Work got done by consumer's contractor	15% on cost of material and labour
4.	Shifting of connection	15% on actual cost of material + actual labour charge
I.	**Supply Arranging Charges -** shall be levied as per the provisions of Chhattisgarh State Supply Code 2005	

Sl. No	Particulars		Approved Charges effective from 1.9.2007
J.	**Hiring of Board's Plant and Equipment**		
1.	For initial agreement period		2% per month on current schedule of rates
2.	For subsequent period of agreement		Twice the above
K.	**Transfer of Name**		
1	LT consumers		Rs. 100/-
2	HT consumers		Rs. 2000/-
L.	**HT/ LT Tariff Booklet**		Rs. 30/-
M.	**Application processing fees**		
1	LT Industrial Consumer	Adjustable in future energy bills.	Rs. 1000/-
2	LT Consumers (Other than Industrial and BPL consumers)		Rs. 200/-
3	HT Consumers		Rs. 5000/-
N.	**Service charge for dishonored cheque**		Rs. 200/- or 0.5% of the amount of dishonored cheque, which ever is higher.
O.	**Stand-by feeder maintenance charge** 132/220 KV consumers		Rs. 2,125 /KM /M
P.	**Maintenance of Street Light**		
1 2 3 4	Filament lamp point Single tube light point Multiple tube light point Special Lighting like MV/ SV lamp point		Rs. 20/- per point Rs .45/- per point Rs. 60/-per point Rs. 90/- per point

Note- Other charges being levied by CSPDCL (successor of CSEB) and not included in the above Schedule of Miscellaneous and General Charges shall continue to be levied by the CSPDCL without any change till further orders.

8 DIRECTIVES OF THE COMMISSION

General

In different parts of this order the Commission has given certain directives with the specific objective of improving the operational efficiency of the three companies and in the interest development of the power sector in the State, both in the short and the long-term. Apart from these, there are certain other issues, not all of which may be directly related to tariff as such, on which the Commission has been giving directons in its tariff orders in the past. Since the tariff order covers in its scope analysis of the performance of the utility, such directives are considered necessary. Accordingly such directives have been included in this order also.

The Commission in the previous tariff orders had issued various directives for reducing the cost and increasing efficiency in the functioning of erstwhile CSEB. The Commission has noted that certain initiatives on operational reform envisaged under the Electricity Act are yet to be taken and on many of the important directives, effective action has not been taken. In some cases action has been taken but the seriousness with which the directives were issued by the Commission has not been very evident in their compliance.

As the CSEB has been restructured into three companies i.e., Generation, Transmission and Distribution companies, have been formed with one Holding company, directives are being given relating to specific companies while there are certain common directives for all the three companies.

8.1 Common Directives

8.1.1 Compliance of Directives issued in previous tariff orders

The Commission had issued certain specific and important directives to CSEB, on improvement of its operational efficiency, in its past tariff order for FY 2007-08. In this tariff order as many as 11 directives were given to CSEB. Some of these directives were of a general nature and required continuous and sustained efforts. These include reduction in T&D losses; cent percent metering, replacement of stopped and defective meters; billing and collection efficiency; accounting and recovery of arrears; control over cost of supply; consumer care and grievance redressal machinery; power purchase and procurement; cadre management and training of personnel; procurement and inventory management and improved governance etc. Some progress has been made in compliance of some of these directives but full compliance has not been done. The Commission however, feels that no useful purpose would be served in repeating these directives in the present order. However, some of the important directives directly related to tariff in which serious action by the companies is required, are discussed in this section.

8.1.1.1 Business plan and investment programme :

In the tariff order for FY 2007-08, the Commission had directed the CSEB that in the next ARR and tariff petition, the Commission will consider the capital investment and financing of the same only on the basis of the long-term capital investment plan approved by the Commission.

The Commission issued the MYT Regulations in 2008 and directed the CSEB to submit three year investment plan with cost benefit analysis along with the medium-term and long-term business plan. A joint business plan of the three functions for the period 2009-10 to 2011-12 was submitted in December 08 which was discussed at length and the Commission directed CSEB to revised the plans. The three companies i.e. CSPGCL, CSPTCL and CSPDCL have submitted separately business plans for the period 2009-10 to 2011-12 in Feb' 09 simultaneously with the tariff petition.

Although CSEB has been unbundled into three companies w.e.f. January 2009, the opening balance sheets of the companies are yet to be finalized and notified by the Government. The Commission has therefore decided to finalize only one year tariff for the year 2009-10 and approve the ARR of only year 2009-10. **The Companies are directed to submit the revised business plan for a period of three years, i.e., FY 2010-11, FY 2011-12 and FY 2012-13 which shall be first control period of the MYT regime by September 2009 so that it can be approved by the Commission before submission of MYT tariff petitions by them in the month of November, 2009.**

8.1.1.2 Gratuity and Pension Fund :

In the tariff order for FY 2007-08, the Commission had directed the Board to ensure that the amounts as booked under the accounts as contribution to the fund are actually contributed, and invested appropriately, so that the funds can be self-generating and no provisioning is required after sometime. Further, the Board was directed to update the actuarial valuation to account for the employees who have joined after January 1, 2004, and are are not eligible for pension, and hence, no provision for pension fund has to be created for such employees. CSPDCL has submitted that the exercise of actuarial valuation is completed and adequate provisions have been indicated under the head employee expenses in the ARR & tariff petition.

The Commission is not satisfied with a general reply as above. Serious questions have been raised in the public hearing in previous year as also this year about the actuarial report on the size of the fund, as also its basis of assessment. As per information submitted by CSPDCL, Rs.2100 crore was available in the fund as on 31st March, 2008. In the proposed ARR for 2008-09 a further accretion of Rs. 394 crore has been taken into account. Thus the fund size should now be about Rs.2500 crore. Although the projection is for a total requirement of Rs.2735 crore as corpus of the fund, the details of arriving at these figures have not been furnished. The single line justification that it is as per the actuarial valuation is not enough. The requirement of addition to the fund has been attributed to increase in terminal benefits (gratuity) and higher pension on account of revision of pay scales. Even taking that into account the annual outgo of terminal benefits is Rs.90 crore while the interest earned from the fund should be much more than that (i.e. about Rs.160 crore @ 8% interest). There is thus no apparent justification for further contribution to this fund. Rs.2500 crore is a large amount and it has been built out of the tariff paid by the consumers. The Commission, therefore, feels it to be necessary that the whole matter is thoroughly examined through an expert who may look into both the size of the fund as also the manner in which the fund is being presently invested. For assessment of requirement of the fund a reasonable time perspective has to be adopted. Secondly a company should not lock-up such large funds out of its business and should use the fund available for business. The Commission will permit further contribution to the fund in the next year only when complete details of this fund are examined by such an independent expert appointed by the CSPDCL or the holding company and all the details are furnished to the satisfaction of the Commission. Further, the Commission directs the Companies to utilise the services of reputed Fund Manager for proper investments of the fund.

8.1.2 New Directives Common to Generation, Transmission and Distribution Companies

8.1.2.1 Functioning of the newly created Companies :

With the restructuring of the erstwhile CSEB, it has becomes essential that the functions of the three companies are clearly defined so that they work independently but in cooperation of each other and the services to consumers are not affected. The Commission during the process of examination of the ARR and tariff petition directed the companies that the power purchase agreement between generation and distribution company, and long term transmission services agreement between transmission and distribution company should now be executed quickly to facilitate independent working of companies. We have directed in this tariff order that generation tariff and transmission charges shall be payable by CSPDCL to CSPGCL and CSPTCL respectively w.e.f. 01.04.2009. The work of drafting of agreements to be executed between the companies has apparently been assigned to a consultant. Five months have passed since the new companies were created. A preliminary agreement could have been entered into between these companies to start with and the final detailed agreement could have been concluded subsequently on receipt of the report of the consultant. **The Commission directs three Companies i.e. CSPGCL, CSPTCL and CSPDCL to urgently take the following steps to ensure independent their functioning:**

- **The three companies should establish their separate financial wings immediately for smooth their operations and should appoint separate Company Secretaries**
- **They should comply with all the statutory provisions of the Indian Companies Act, 1956 and get their accounts audited for the three months operation of FY 2008-09 i.e. from January 2009 to March 2009 as per the provisions of Companies Act.**
- **CSPDCL enter into long-term Power Purchase Agreement with CSPGCL at the earliest and long-term Transmission Services Agreement with CSPTCL immediately.**

These two agreements are very basic requirements for functioning of CSPDCL as also the other two companies and should be entered into within the next month.

8.1.2.2 Approval of renovation and modernisation schemes and large schemes

While the Commission has approved the capital expenditure as envisaged for the current year by the three companies, the Commission directs the companies to submit the scheme-wise details of the capital expenditure for each scheme involving an expenditure of Rs 5 crore and above for prior approval of the Commission. The schemes should be submitted along with detailed project reports and wherever necessary with the cost-benefit analysis. As mandated in regulation 10 of CERC (Terms & Conditions of Tariff) Regulations, 2009 renovation and modernisation of any generation station or a transmission system should first be got approved from the Commission as per the procedure laid down therein. Any scheme taken up without specific approval of the Commission shall be disallowed in the ARR.

8.2 DIRECTIVES TO GENERATION COMPANY (CSPGCL)

8.2.1 Compliance to Directives issued in previous tariff orders

8.2.1.1 Installation of weightometer in generating stations

Considering the importance of weightometers for accurate measurement of stacking and transit loss of coal, the Commission had directed to the CSEB install the weightometer in Korba (W) power-house by March' 08 and a gravimetric coal feeder at Korba (E), Unit No. 6 by June' 08. The Board had submitted a report on 27.11.08 that all 24 weightometers have been installed in Korba (W) and in respect of Korba (E), it was reported that orders for erection, testing and commissioning of 4 gravimetric raw coal feeders for Unit No. 6 of the Korba (E) had been placed. The same progress has been reported by generating company in their petition submitted in the month of February, '09. It is thus seen that no progress in this respect has been made since the last six months. Despite the directions of the Commission that quarterly progress report be submitted, nothing has been heard from the generating company. **The Commission directs the CSPGCL to expedite the work of installing and commissioning the weightometers on all the generating stations and submit progress report to the Commission within three months, and every quarter thereafter, if necessary.**

8.2.1.2 Energy audit of power station:

The Commission had also directed the CSEB in the previous tariff order, that a time bound programme for energy audit of all of its power stations should be prepared. Such energy audit was to be undertaken in-house or by outsourcing energy auditors. It was specifically directed that this task should be taken up within three months and complete it within one year.

No action has so far been taken on this directive and nothing has been mentioned about compliance of this directive in the tariff petition. **The Commission directs the CSPGCL to prepare a time bound programme for energy audit of all of its power stations including hydel and small hydel power stations and submit the same to the Commission within 3 months from the date of this order. CSPGCL should also submit the action taken report for improvements on the basis of energy audit report every quarter.**

8.2.2 New Directives

8.2.2.1 Tariff Structure

The Commission intends to approve the station-wise two part tariff for each generating station of CSPGCL from FY 2010-11 onwards. Accordingly, **the Commission directs CSPGCL to allocate the assets and liabilities of CSPGCL to each generating station and submit two part tariff consisting of Fixed Charge in Rs. Crore/month and Energy Charge in Rs./kWh in the MYT Petition for the control period of FY 2010-11 to 2012-13.**

8.2.2.2 Quality of Coal and Performance Parameters

The Commission has observed that the performance parameters of CSPGCL stations in terms of PLF, station heat rate and secondary fuel oil consumption has deteriorated in the previous two years. The reasons for the same has been stated to be poor quality of coal. On the basis of this the Commission has approved relaxed norms for CSPGCL thermal stations for FY 2009-10. However, **the Commission directs CSPGCL to take up the matter of poor quality of coal with Coal India Limited (SECL) and submit a report to the Commission on the outcome within 3 months from the date of this order. The company may consider appointing an outside agency for better co-ordination with SECL to ensure quantity and quality of coal supply. The Commission further directs CSPGCL to submit quarterly report on performance parameters and fuel information i.e, Plant Load Factor, Station Heat Rate, Auxiliary Consumption, Gross Calorific Value of coal and oil, price of coal and oil, Specific Oil Consumption and Transit Loss for each generating station on regular basis to the Commission.**

8.2.2.3 Optimization of Hydel Generation

Generation from hydel station was less during F.Y. 2008-09 in comparison to the generation during 2007-08. One of the reasons may be lack of co-ordination between Water Resource Department (WRD) and the company**. CSPGCL should operate its hydel generating stations in coordination with the State Irrigation Department and optimise the hydel generation. There appears to be lack of coordination at present.**

8.3 DIRECTIVES TO TRANSMISSION COMPANY (CSPTCL)

8.3.1 Compliance to Directives issued in previous tariff orders

8.3.1.1 Transmission Losses

The transmission losses as reported by CSPTCL for FY 2007-08 are 5.22%, as compared to actual transmission losses of 4.03% reported in FY 2006-07. CSPTCL has submitted that the increase is mainly because of the increase in open access energy transactions. **CSPTCL should check up the correctness of the transmission loss reported for the FY 2007-08 and take action for its reduction by timely implementation of the system improvement/loss reduction works proposed. The transmission company should coordinate with SLDC & CSPDCL and get quarterly State Energy Account prepared by SLDC to know the exact quantum of the energy input, the transmission system in use, inter-State import and export of energy, energy sent to distribution periphery and energy supply to EHT consumers to find out correct transmission loss so that short-term and long-term action can be taken by the transmission company to reduce losses.**

8.4 DIRECTIVES TO DISTRIBUTION COMPANY (CSPDCL)

8.4.1 Compliance to Directives issued in previous tariff orders

8.4.1.1 Energy audit and DSM

The erstwhile CSEB was directed to take up the work of energy audit and adoption of demand side management practices. CSEB had engaged M/s ABPS Infrastructure Advisory Limited, Mumbai for consultancy regarding activities in DSM load study and energy conservation. The preliminary concept report had been submitted by the consultant on 05.05.08 and draft final report have been submitted on 30.09.2008. The comments on the final draft have been given recently by the company. CSEB had also reported on 27.11.08 that the Board had executed an agreement with M/s Banyan Environmental Innovations Pvt. Ltd., Hyderabad to distribute CFL among consumers at most competitive rates by availing CDM benefit, but nothing has been mentioned about the present status of the scheme in the petition. CSPDCL's response in this respect is inadequate.

The Commission has further observed that Bureau of Energy Efficiency, Govt. of India has introduced Bachat Lamp Yojna (CDM based CFL scheme). It is observed from the scheme that the then CSEB as distribution licensee had shown its intent to Bureau of Energy Efficiency for undertaking such project in the state. **The Commission directs CSPDCL to follow up with the consultant for submission of final report and take suitable action for demand side management. The CSPDCL should also consider implementing the Bachat Lamp Yojna in the State. While implementing the Bachat Lamp Yojna, priority may be given to BPL consumers, so that they may have more illumination in their households within the limit of 120 watts.**

8.4.1.2 DSM for Load Control through Agricultural Feeders

The maximum and minimum demand of the state during a day is creating peak and dip in the daily load curve. CSEB has inititated "ATAL JYOTI YOJNA" for separating feeders of agricultural pump set from the rural domestic light and fan (DLF) feeders by laying separate 11 KV line for agricultural pump sets. The main objective of feeder separation is to flatten the load curve by reducing evening peak by arranging the time schedule of agricultural feeders round the clock. **The Commission directs CSPDCL to implement suitable measures for such agricultural feeders with a view to minimise the evening peak.**

8.4.1.3 Improvement in billing and collection efficiency:

The Commission had given several directives related to metering, billing and collection of current dues as well as arrears in order to streamline in the process and minimize the time lag between the actual sale of electricity and receipt of revenue, etc. These include;

- Billing through automated meter reading for HT consumer.
- Increase the avenues and facilities for revenue collection such as through ATP, ATM, Banks, Post office etc;
- Focus on specific circles in which collection is poor and give specific targets for collection to these circles. These circles should institute a system of incentive and dis-incentive for their employees for this work.
- Follow up the Government departments and local bodies which have defaulted in payment of electricity bills.

CSPDCL has submitted that the following action has been taken in this regard :

(1) Automated meter reading (online): The billing of 100 HT consumers of O&M division, Urla has been taken up in first phase.

(2) 20 ATP machines have been installed to facilitate bill collection. Bill payment has been extended through internet and ATM of SBI. It has also been reported that agreement with 53 franchises covering 891 villages has been executed, but their details and present status of functioning has not been mentioned.

No proposal for incentive and dis-incentive for the employees on this account has been received so far. The distribution company is also silent on the action taken on recovery of arrears outstanding against Government departments and local bodies. This is an area which needs urgent attention.

Though the collection facility in urban areas has somewhat improved after installation ATP machines and payment through ATM, the facilities in many urban and all rural areas for billing and collection appear to have not changed. **CSPDCL is directed to take up the work of online meter reading of all HT consumer after successful completion of online meter reading of 100 HT consumers of Urla division.** The possibilities of online meter reading of big LT industrial consumers located in Raipur, Bilaspur, Durg and Bhilai area should also be explored. The possibility of the spot billing in other towns and cities after a successfully execution in Dhamtari town should be examined and implemented. **The Commission directs CSPDCL to implement the various measures suggested above for improving the billing and collection.** The Commission has also observed that in some of the circles the arrears are 9 to 10 times of the monthly demand which is alarming. CSPDCL should already been directed to expedite recovery against old arrears by giving specific target to the field officers and ensure compliance.

8.4.1.4 Checking of power theft:

The distribution loss of CSEB for FY 2007-08 was 39.32% which is very high. The Commission has repeatedly emphasized the urgent need for segregation of technical and commercial losses through a proper loss study and to make efforts for reducing commercial losses i.e. pilferage and theft of electricity. Some of the directives issued were :

(i) Every circle shall identify theft prone areas and draw up plans for checking theft of energy and take remedial action.

(ii) It was also specifically instructed that clear guidelines should be isued to the field officers to deal the cases related to section 126 and 135 of the EA, 2003, so that the field officers are aware of the difference between the two. This will facilitate preparation of theft cases properly and their submission to the special courts.

(iii) The Board should urgently take up the programme for laying aerial bunch cable in theft-prone areas on a large scale.

(iv) A system of incentive and dis-incentive for the Board's staff posted in such areas should also be formulated.

CSPDCL has submitted that the checking of connections is being carried out and theft cases detected are being dealt with as per law. It has also been reported that instructions have been issued to the field officers for taking suitable action to deal with the cases related to section 126 and 135 of Electricity Act, 2003. It has also been reported that 56 Kms aerial bunch cable has been installed in theft prone area. The reply of the distribution company is not satisfactory. The Commission has seen the instructions issued by them vide letter dated 16.07.07 to the field officer to deal the cases under section 126 and 135 of EA, 2003. The instructions do not give clear guidelines to the field officers. This has already been pointed out to the distribution company in the tariff order of 2007-08. The progress of 49.63 Kms of aerial bunch cable in theft prone area was reported in a letter dated 27.11.08 and the same figure has been reported in the tariff petition submitted in the month of Feb'09. It indicates that limited progress has been made in this regard. **The Commission directs the CSPDCL to take up compliance of all the directives issued in earlier tariff orders in this regard on priority basis.**

8.4.1.5 Distribution losses and AT&C Losses:

The overall T&D losses of CSEB for FY 2007-08 are reported to be 34.40% as against a target of 32.54%. The Commission has observed that no significant reduction in the losses has been achieved during the last three years nor has any significant efforts made. The State Government in FY 2007-08 had notified an action plan for reduction of AT&C losses to 29% during FY 2007-08. Thus the performance of erstwhile CSEB during FY 2007-08 was far from the target specified by the Commission as well as from the action plan prepared by the State Govt.

Looking to the wide variation between the actual losses and the loss reduction targets, the Board was advised by the Commission to get the actual loss evaluated through a proper reputed consultant, prepare an action plan based on the outcome of the study and take suitable action for reduction of the distribution losses. This work was awarded to a consultant M/s SNC Lavalin, who has completed the work and the detailed outcome report is expected to be received shortly. CSPDCL has also submitted that the various actions to reduce technical and commercial losses such as execution of new line and sub-stations, checking of the connections and installation of meters in un-metered single point and pump connections etc. are in progress.

The replies and progress submitted by the CSPDCL is not satisfactory and does not clearly reflect the action taken by them to reduce the distribution losses. The Commission in this order has directed the CSPDCL to reduce the distribution losses during 2009-10 by 3% as per the Abraham Committee Report recommendations. **CSPDCL is directed to fix up a circle-wise trajectory for loss reduction and prepare a detailed action plan for reduction of distribution and AT&C losses during FY 2009-10. The acation plan for reduction of losses during FY 2009-10 should be submitted to the Commission within two months from the date of this order. The Commission also directs CSPDCL to create separate cell to reduce AT&C losses. It should be headed by a senior officer with sufficient supporting staff and directly reporting to MD of the company. This cell shall be responsible for monitoring losses, implementation of all schemes and all action for reduction of AT&C losses.**

8.4.1.6 HT consumer cell :

The Board was directed in the previous tariff order to establish a HT Consumer Cell in the head office so that the cases of these important consumers are attended to promptly and dealt timely and properly. After repeated reminder, a cell has been created in the office of CE (Commercial). It has been reported by the distribution company that 28 complaints had been received by the cell out of which 19 has been settled. The reasons for the balance complaints remaining unsettled have not been furnished. It appears that either the cell is not working properly or there is no proper coordination between the different wings of the distribution company as the connections of more than 100 HT consumers are still pending in the State, out of which 25 cases are of those for whome line extension work has been completed. Applicants are ready to avail the connection but the connection could not be released to them on account of non-availability of the metering equipment (CTPT). **The Commission directs that CSPDCL shall take immediate action for procuring/arranging the CTPT units for these HT consumers and ensure that the HT connections do not remain pending for want of meters in future. Compliance on this should be reported within a month.**

8.4.1.7 Timely and correct preparation of R-15 statement:

The Board was advised for revision of the R-15 statement as per the consumer categories approved in the tariff order. CSPDCL has informed that from April 1, 2008, the R-15 is being prepared as per the consumer categories of the tariff order. However the Commission has observed from the R-15 received that there is delay in submission of R-15 and a number of discrepancies have been observed in statements submitted. Some of the discrepancies have been brought to the notice of the company by this Commission's letter No 505 dated 08.04.2009. It is gathered that the consolidated R-15 is prepared manually and hence there is delay in submission. Since the sales and revenue data are compiled in the SAP software, it is not clear why the R-15 is being prepared manually. **CSPDCL shall ensure that the discrepancies in R-15 are removed and are not repeated in future. It should also be ensured that R-15 for both LT and HT are now prepared through SAP software. Preparation of both HT & LT R-15 through SAP software should be ensured within three months. All the level of R-15 should be prepared on computer through SAP software.**

8.4.1.8 Consumer interface :

The Commission had directed the erstwhile Board for improvement in the consumer services specifically re-opening the call centres at Raipur and Bilaspur and to provide centralised grievance recording and Redressal. It is gathered that a call centre has started functioning recently at Bilaspur but not so far in Raipur. **CSPDCL is directed to get call centres started urgently at Raipur and also at other places. The usefulness of call centres, which can not only handle consumer complaints, but also act as bill payment centres, receive applications for new connections and provide a host of other services, need hardly be repeated.**

8.4.1.9 Conversion of BPL consumers to Domestic Category:

As discussed in Section 5 of the Order, the Commission has accepted the CSPDCL's proposal for migration of 40% of existing BPL consumers to Other Domestic sub-category. **The Commission directs the CSPDCL to expedite the efforts in this regard and shift the consumption of such 40% existing BPL consumers other Domestic sub-category by September 30, 2009. The Commission further directs that at any time if the connected load in any household exceeds 120 W, it should immediately be converted to Other Domestic category without waiting for the annual consumption.**

The Commission also directs that no existing domestic consumer be allowed to avail of BPL tariff facility only on the basis of BPL card and that any such application should be thoroughly scrutinized and the connected load assessed before such conversion, which should, if at all, be rare.

Annexure 1

LIST OF OBJECTORS WHO SUBMITTED WRITTEN OBJECTIONS/SUGGESTIONS

S.No.	Name & Address of the Party
1	Shri Shivendra Agrawal, Agrawal House, 53, Sunder Nagar, Raipur
2	CG Mini Steel Plant Association, 23/130, R.S. Shukla Road, Raipur
3	Shri Bahadur Ali, Zonal Chairman, National Egg Co-ordination Committee, Rajnandgaon
4	Shri Malay Jain, HIG-157, Padmanabhpur, Durg
5	CG Krishi Vaniki Samaj, HIG-157, Padmanabhpur, Durg
6	CG Pradesh Rice Millers Association, Adishwer Complex, Punjab Oil Mill Gali, Ramsagar Para, Raipur
7	East Coast Railway, O/o Chief Electrical Engineer, 3rd Floor, South Block, Rail Kunj, Chandrashekharpur, Bhubaneswar
8	Urla Industries Association, Urla Industrial Complex, Raipur
9	CG Sponge Iron Manufacturers Association, 318, 3rd Floor, New Patwa Complex, Lalganga Mension, MGRoad, Raipur
10	CG Steel Re-Rollers Association, 1st Floor, Sona Tower, Ramsagar para, Raipur
11	South East Central Railway, O/o Chief Electrical Engineer, Bilaspur
12	M/s Jay Ambey Metal Works Pvt. Ltd., 749/8, Behind Banjari Mandir, Rawa Bhata Ind. Area, Raipur
13	Chhattisgarh Udyog Mahasangh, Punjabi Colony, Katora Talab, Raipur
14	M/s Hi-tech Abrasive Ltd., 740/I&J, Sector-B, Urla Industrial Complex, Raipur
15	M/s Shree Sankat Mochan Oil Mill, Plot No. 4, Industrial Area, Banaras Road, Ambikapur, Surguja (C.G.).
16	M/s M.P. Oil Extraction Pvt. Ltd., 22/55, Industrial Area, Bhanpuri, Raipur
17	M/s K.N. Oil Industries Ltd., Ashram Road, Mahasamund (C.G.)
18	M/s Core Fab Projects Pvt. Ltd., 26/197, Appapura, Durg (C.G.)
19	M/s Global Engineering & Consultants, 26/197, Appapura, Durg (C.G.)
20	M/s Sankat Mochan Gur & Khandsari Udyog, Vill.- Baherdih, Post-Lundra, Surguja (C.G.)
21	M/s A.C. Steels, 23/130, R.S. Shukla Road, Raipur (C.G.)
22	M/s Jai Hanuman Rice Mill, Bhagwanpur, Ambikapur (C.G.)

S.No.	Name & Address of the Party
23	M/s A.K. Products, 32/A, Industrial Estate, Tifra, Bilaspur (C.G.).
24	M/s Shri Pawan Oil and Rice Mill, Near of Railway Station, Ajirma, Ambikapur, Surguja (C.G.)
25	M/s Shri Ram Industries, Deviganj Road, Ambikapur (C.G.)
26	M/s Jai Mata Di Gur & Khandsari Udyog, Vill.- Batwahi, Block-Lundra, Surguja(C.G.)
27	M/s Jai Balaji Rice Mill, Vill-Mendrakala, Ambikapur (C.G.)
28	M/s Jindal Agro Products, Vill-Keshavnagar, Post-Bishrampur, Surguja (C.G.)
29	M/s Jindal Agro Mills, Vill-Keshavnagar, Post-Bishrampur, Surguja (C.G.)
30	M/s Shri Shyam Ice & Cold Storage, Manendragarh Road, Ambikapur, Surguja (C.G.)
31	M/s Maa Mahamaya Rice Mill, Vill.-Krantiprashpur, Darima Road, Ambikapur
32	M/s Ambe Industries, Navapara, Vill.-Chathirma, Banaras Road, Ambikapur.
33	M/s Progressive Exim Ltd., Shanti Sada, 1-Maidan Path, Opp. Jila Sahkari Bank, Choubey Colony, Raiipur (C.G.)
34	M/s Shree Krishna Solvent, “Chhatamura”, Raigarh (C.G.)
35	M/s Chhattisgarh Solvent Extractors Association, 108, Arihant Complex, Station Road, Raipur (C.G.)
36	M/s Kamal Solvent Extractions Pvt. Ltd., Mundra Niwas, Rajnandgaon (C.G.)
37	M/s Drolia Electrosteels Pvt. Ltd. B-9, Anupam Nagar, Raipur (C.G.)
38	M/s Bhilai Steel Plant, Bhilai, Durg (C.G.)
39	M/s Kontinental Steel Korporation, G.E. Road, Kumhari, Distt. Durg
40	M/s Shivam Structural & Steel Rolling Mills Pvt. Ltd., G.E. Road, Tatibandh, Raipur
41	M/s Amrit Steel Rolling Mill, 870 to 878, Sector-D, Urla Industrial Area, Raipur
42	M/s Indian Ispat Works Pvt. Ltd., Q-2, Farishta Complex, G.E. Road, Raipur
43	M/s Bhagwati Industries, Industrial Area, Banaras Road, Ambikapur
44	M/s Venkateshwar Strips Pvt. Ltd., Plot No. 686/A, 687,655/B, 656, Urla Industrial Complex, Urla, Raipur
45	M/s Venkateshwar Ispat Pvt. Ltd., Plot No. 657 to 659, 682 to 685, 686/B, Urla Industrial Complex, Urla, Raipur
46	M/s Orient Steel Rerolling Mill, 26, Akash Ganga Complex, Supela, Bhilai, Distt. Durg

S.No.	Name & Address of the Party
47	M/s Orient Ispat Private Ltd., 26, Akash Ganga Complex, Supela, Bhilai, Distt. Durg
48	M/s PS Steel Tubes Ltd., 26, Akash Ganga Complex, Supela, Bhilai, Distt. Durg
49	M/s Chhattisgarh Cold Storage Pvt. Ltd., Umiya Market, Ring Road No.2, Bhanpuri, Raipur
50	M/s Shri Om Manufacturing (India) Pvt. Ltd., Agrasen Chowk, Ambikapur
51	M/s Agrawal Aluminium Industries, Gram-Ajmira, Po. Raughapuri, Distt. Surguja
52	M/s Ganga Water Tank Industries, Gram-Ajmira, Po. Raughapuri, Distt. Surguja.
53	Surguja Rice Millers Association, Ambikapur, Surguja
54	Chhattisgarh Laghu & Sahayak Udhog Sangh, Tifra Industrial Estate, Bilaspur
55	Chhattisgarh Aluminium Bartan Udhog Sangh, H.O. M/s Shri Sharda Alumunium Works, Banaras Road, Ambikapur
56	M/s Surguja Pipe Pvt. Ltd., Gram Ajirma, Post. Raughapuri, Distt. Surguja
57	M/s Ambe Pets, H.O. Navapara, Pratapnagar, Ambikapur
58	M/s Vandana Ispat Ltd., Vandana Building, M.G. Road, Raipur
59	M/s Super Iron & Steel Pvt. Ltd., Ring Road No.2, Sarora, Urla Industrial Area, Raipur
60	M/s GP Ispat Private Ltd., Plot No. 688-693, Urla Industrial Growth Centre, Raipur
61	M/s Vandana Rolling Mills Ltd., Vandana Building, M.G. Road, Raipur
62	M/s Indian Solvent Industries, Baldeo Bag, Rajnandgaon
63	M/s Poha Murmura Nirmata Kalyan Samiti, Bhatapara, Distt. Raipur
64	M/s Shri Radhakrishna Steels Ltd., Plot No. 103, Tatibandh, Raipur
65	Dhamtari Rice Mill (Owners) Association, Narayan Rice Mill, Industrial Ward, Dhamtari
66	Confederation of Indian Industry, P-25, Sector-1, Near Sub Station, Avanti Vihar, Raipur (C.G.)
67	Urla Industries Association, Urla Industrial Complex, Raipur
68	M/s Ispat India, Plot No. 4&9, Phase-II, Industrial Area, Siltara, Raipur
69	Shri Bahadur Ali, Baldev Bag, Rajnandgaon.

S.No.	Name & Address of the Party
70	M/s Shree Sudarshan Ispat Pvt. Ltd., Plot No. 643-644, Sector-B, Urla Industrial Area, Raipur
71	M/s Rituraj Agrotek Pvt. Ltd., Bhaleshar Road, Mahasamund
72	M/s Rishabh Nutrients Pvt. Ltd., Baronda Chowk, Mahasamund
73	M/s Bhomia Copper Pvt. Ltd., 366&367, Urla Industrial Area, Raipur
74	M/s Kreetika Wires Pvt. Ltd., Plot No. 154, Industrial Area, Sector-C, Urla, Raipur
75	M/s RBS Transformers & Switchgears (P) Ltd., Sec-C, Urla Industrial Area, Raipur
76	M/s Anand Tiles, 208/B, Sector-C, Urla Industrial Area, Raipur
77	M/s Jet Industrial & Engineering Co. Pvt. Ltd., 1, Urla Industrial Estate, Raipur
78	M/s Ratusaria Steels Pvt. Ltd.,217(P), 218,219, Urla Industrial Area, Sec-C, Raipur
79	M/s Ishwar Ispat Industries Pvt. Ltd., Plot No. 168, Sec-C, Urla Industrial Complex, Raipur
80	M/s Ashirwad Ispat Udyog, 36-38, Sec-C, Urla Industrial Area, Raipur
81	M/s Shri Giriraj Structures Pvt. Ltd., Plot No. 7, Urla Industrial Area, Raipur
82	M/s M.P. Carbon Pvt. Ltd., 322-324, Urla Industrial Area, Sec-C, Raipur
83	M/s Om Chemical Industries, 654-A, Urla Industrial Estate, Raipur
84	M/s Gangotri Metal & Alloys (I) Pvt. Ltd., 304, Samta Colony, Near Water Tank, Raipur
85	M/s Paras Oil Extraction Ltd., 21/630, Ganjpara, Raipur
86	M/s Paras Vanaspati Pvt. Ltd., 21/360, Ganjpara, Raipur
87	M/s Bhimsaria Doors (Pvt.) Ltd., Street No. 2, Near Shiv Mandir, Fafadih, Raipur
88	M/s Classic Engineers & Fabricators, Pratiksha, 9, Sahkari Marg, Choubey Colony, Raipur
89	M/s Shyam Steel Udyog, 573-B, Urla Industrial Area, Raipur
90	M/s Harshad Thermic Industries Pvt. Ltd., Near Rani Sati Mandir, Behind Forest Office, G.E. Road, Raipur
91	M/s Baldev Alloys Pvt. Ltd., “Kapoor’s House”, 24 College Road, Choubey Colony, Raipur
92	M/s Chhattisgarh Steel Product, Plot No. 190,192,193, Sec-C, Urla Ind. Complex, Raipur

S.No.	Name & Address of the Party
93	M/s SBT Textiles Pvt. Ltd., 589, Urla Industrial Area, Raipur
94	M/s Raipur Carbonics Pvt. Ltd., Plot No.738(Part) & 739 (Part), Sec-B, Urla Industrial Area, Raipur
95	M/s Steel Abrasive Ind. Ltd., 740-D, Sec-B, Urla Ind. Complex, Raipur
96	M/s Uniworth Ltd., 923-945, Urla Growth Centre, Urla Ind. Estate, Raipur
97	M/s Chetan Industries Ltd., Urla Sarora Road, Opp. CSEB Sub-station, Raipur
98	M/s Eastern Fabritech Pvt. Ltd., 642B, Sector-B, Urla Industrial Area, Rairpur
99	M/s Nikita Metachem Pvt. Ltd., Q-40, Sec-2, Avanti Vihar, Near Telibandha, Raipur
100	M/s Nikita Mettalurgicals Pvt. Ltd., Q-40, Sec-2, Avanti Vihar, Raipur
101	M/s Venkateshwar Strips Pvt. Ltd., Plot No. 686/A., 687,655/B, 656, Urla Industrial Complex, Raipur
102	M/s Venkateshwar Ispat Ltd., Plot No. 657 to 659, 682 to 685, 686/B., Urla Industrial Complex, Raipur
103	M/s Narayani Steel Industries, 11, Recreation Road, Choubey Colony, Raipur
104	M/s Fabritech Engineers, 740-C, Sec-B, Urla Industrial Area, Raipur
105	M/s Kesri Metal Ltd., 561, Urla Industrial Area, Raipur
106	M/s Arpee Ispat Pvt. Ltd., Mouza Dag No. 505/1 & 506, Sondra, Siltara, Birgaon, Raipur
107	M/s Indo Lahari Bio Power Ltd., 38, Shaheed Smarak Complex, Opp. Nava Bharat Press, G.E. Road, Raipur
108	M/s Nutan Ispat & Power Ltd., 38, Shaheed Smarak Complex, Opp. Nava Bharat Press, G.E. Road, Raipur
109	M/s Leal Associates, 421-J, Road No. 33, Sec-C, Industrial Area, Urla, Raipur
110	M/s Orissa Concrete & Allied Ind. Ltd., Industrial Area, Bhanpuri, Birgaon, Raipur
111	M/s Gold Star Steels (P) Ltd., 53/A, Industrial Area, Bhanpuri, Birgaon, Raipur
112	M/s Sunil Steels, 560, Urla Industrial Complex, Raipur
113	M/s Vindhyavasini Industries Pvt. Ltd., 502-508, Urla Industrial Area, Raipur
114	M/s Raipur Paper Box Industries, Plot No. 328/29, Urla Industrial Area, Raipur
115	M/s Vithal Industries, Plot No. 900, Urla, Sarora, Raipur
116	M/s Dinesh Industries, Telibandha, Raipur
117	M/s Smriti Chemicals, Naman, 31, Sec-1, Gettanjali Nagar, Raipur

S.No.	Name & Address of the Party
118	M/s Sunny Wires, 73, Vivekananad Nagar, Raipur
119	M/s Technoworth Associates, 73, Vivekananad Nagar, Raipur
120	M/s Kamlesh Agrotech, 402, Gandhi Complex, Bal Ashram Road, Kutchery Chowk, Raipur
121	M/s Shri Bajrang Alloys Ltd.,521/C, Urla Industrial Complex, Raipur
122	M/s Saket Industrial Gases Ltd., Urla Industrial Complex, Raipur
123	M/s Saket Oxygen (P) Ltd., Urla Industrial Complex, Raipur
124	M/s Pankaj Oxygen Ltd., Urla Industrial Complex, Raipur
125	M/s Elmech Industries, Sec-C, Plot No.346, Urla Industrial Area, Raipur
126	M/s Hanukripa Ispat Pvt. Ltd., Sarora Road, Urla, Raipur
127	M/s Kwality Metal Craft (Pvt.) Ltd., 525 A&B, Urla Industrial Area, Raipur
128	M/s Jabbal & Sons, Plot No. 972, Sec-D, Industrial Area, Urla-Sarora, Raipur
129	M/s Raipur Forgings Pvt. Ltd., Plot No. 2&3, Urla Industrial Area, Raipur
130	M/s Avinash Ispat Pvt. Ltd., 200-A, Industrial Estate, Urla, Raipur
131	M/s Agarsen Re-rollers Pvt. Ltd., 200-A, Industrial Estate, Urla, Raipur
132	M/s Raipur Transformers, 590, Urla Industrial Complex, Raipur
133	M/s Radhe Hurkat Ispat Pvt. Ltd., Plot No. 735/B, Urla Industrial Area, Raipur
134	M/s Holdwell Components Pvt. Ltd., Plot No. 64-A, Sec-C, Urla Industrial Area, Raipur
135	M/s Royal Fasteners Pvt. Ltd., Plot No. 64-B, Sec-C, Urla Industrial Area, Raipur
136	M/s. Shivali Udgyog(I) Ltd. Plot No. 3 & 4, Sector-D, Urla Indusrial Complex, Sarora, Raipur (C.G.)
137	Shri Vivek Dhand, Principal Secretary, Govt. of Chhattisgarh, Mantralaya, Urban Administration Development Department, Raipur (C.G.)
138	Chhattisgarh Chamber of Commerce & Industries, Ch. Devilal Vyapar Udyog Bhawan, 2nd Floor, Bombay Market, Raipur(C.G.)
139	M/s Ashok Ispat Udyog, 3, Central Avenue, Choubey Colony, Raipur.
140	M/s Prakash Industries Ltd., New Industrial Area, Ring Road No. 2, Gogaon, Raipur
141	M/s Sree Satya Fasteners (P) Ltd., 597, Urla Industrial Area, Raipur
142	M/s Mahamaya Ispat (A division of Abhishek Steel Industries Ltd.), 535, Urla Industrial Complex, Raipur
143	Shri Vivek Dhand, Principal Secretary, Govt. of Chhattisgarh, Mantralaya, Urban Administration Development Department, Raipur (C.G.)

Annexure 2

LIST OF PERSONS WHO ATTENDED THE PUBLIC HEARINGS

Public hearing at Raipur on 17.04.2009 & 18.04.2009	
S.No.	**Name & Address**
1.	Shri Moolchand Jain, General Secretary, Chhattisgarh Krishi Vaniki Samaj,
2.	Shri Kranti Das, Agriculturist
3.	Shri Sunil Jain, Agriculturist
4.	Shri Malay Jain, Agriculturist
5.	Shri P.A. Pandey, DGM, NTPC
6.	Shri Nageshwar Rao, W-O, NTPC
7.	Shri Mohan Anty, Advocate, Raipur
8.	Shri Anirban Banerjee, Manager, IMaCS
9.	Shri Shuaib Kamili, Consultant, IMaCS
10.	Shri Anil. V. Kale, Consultant, ImaCS
11.	Shri Shree Kumar Menon, Corporator, RMC
12.	Shri Ritesh Jain, Jt. Secy., Dhamtari Rice Mill Association
13.	Shri Sanjay Rakgcha, Secy., Dhamtari Rice Mill Association
14.	Shri Roshan Hablani, President, CG Poha Association, Bhatapara
15.	Shri Ashok Thurani, CG Poha Association, Bhatapara
16.	Shri Laxman Thurani, CG Poha Association, Bhatapara
17.	Shri N.D. Balani, CG Poha Association, Bhatapara
18.	Shri Mahesh Kakkad, CG Cold Storage, Raipur
19.	Shri Promod Jain, Rice Miller, Raipur
20.	Secretary, CG Rice Mill Association
21.	Shri N.K. Somani, CG Rice Mill Association,
22.	Shri Sanjeet Kumar, Nai Duniya, Raipur
23.	Shri Anup, Raghupati Ispat, Gogaon,

Public hearing at Raipur on 17.04.2009 & 18.04.2009	
S.No.	**Name & Address**
24.	Shri Yasmin Rizvi, Prabhar TV, News channel
25.	Er. Shyam Kabra, President, Urla Industries Association,
26.	Er. C.P. Sharma, Advisor, SEML, Raipur
27.	Shri Manish Mohta, SSDL, Raigarh
28.	Shri P.B. Murty, DGM, Arasmeta Captive Plant
29.	Shri S.K. Goyal, Director, SPIL, Raipur
30.	Shri Manohar Singh Saini, Secretary, CSRA
31.	Shri Bimlesh Gupta, Tedesara Ind. Association
32.	Shri Mahesh Kakkar, Chairman, CUM
33.	Shri Anil Nachrani, President, Sponge Iron Association
34.	Shri B.P. Mishra, Urla Industries Association
35.	Shri Arun Poddar, GM (Comml.), Hira Group
36.	Shri Prateek Pandey, Officer, Arasmeta Captive Co. Ltd.
37.	Shri P.C. Parode, GM, Ispat India
38.	Shri Yaswant Yadav, Advocate, CG Mini Steel Plant Association
39.	Shri Abinash Mishra, Reporter, Zee 24 News Channel
40.	Shri R.K. Pandey, EE, Municipal Corporation, Raipur
41.	Shri Vimal Sharma, SE, Municipal Corporation, Raipur
42.	Shri KK Agrawal, Vice President, CGMSP
43.	Shri Binod Agrawal, Director, Hitech Power & Steel Ltd.,
44.	Shri Ashok Kumar Agrawal, President, CSRA
45.	Shri R.K. Khedia, Jt. Secy., CSRA
46.	Shri Vijay Bothra, ED, CSRA
47.	Shri Manish Mehta, Salasar Steel & Power
48.	Shri Pradeep Sejpal, Manager, Rajaram Maize
49.	Shri Ramesh Agrawal, V. President, CMSPA

Public hearing at Raipur on 17.04.2009 & 18.04.2009	
S.No.	**Name & Address**
50.	Shri Sandeep Dhupar, Director, Water-world
51.	Shri Sanat Joshi, CG SIMA
52.	Shri Anjum Alvi, ED, IB Group
53.	Shri Bahadur Ali, MD, IB Group
54.	Shri Kishore Ghosh, Proprietor, H.N. Poultry
55.	Shri S.K. Jaggi, Jaggi Poultry Farm
56.	Shri Kiran Patel, Patel Poultry Farm
57.	Shri Ashok Pathak, Secretary, Janta Union
58.	Shri Mathura, G.Secy., CRVK Janta Union
59.	Shri Hardeep Singh, Manindra Poultry Farm
60.	Shri RV Pandey, AM (FIN), SAIL, BSP
61.	Shri R.K. Bhattacharya, Sr. Mgr., SAIL, BSP
62.	Shri K. Harinarayana, Dy. GM, SAIL, BSP
63.	Shri S.Laxmi, Sr. Mgr., SAIL, BSP
64.	Shri D.K. Saha, AGM, SAIL, BSP
65.	Shri T.P. Acharya, Editor, Ispat Times

Public hearing at Jagdalpur on 20.04.2009	
S.No.	**Name & Address**
1.	Shri PR Bothra, Regional V.President, Chhattisgarh Udyog Mahasangh
2.	Shri Yogesh Panigrahi, Reporter, Highway Channel
3.	Shri S.K. Behra, Manager, NMDC
4.	Shri S.S. Gill, Shailendra Industries
5.	Shri Ashok Somani, Director, Somani Cold Storage
6.	Shri Alok Mehra,NMDC
7.	Shri R.S. Khushwaha, Dalpat Sargam Ward
8.	Shri Kishore Parakh, President, Bastar Chamber of Commerce
9.	Shri Chandrashekhar Prasad, Sr. Mgr, TATA Steel
10.	Shri Vikram Sharma, President, Industries Association
11.	Shri K.K. Vasudevan, Bureau Chief, Deshbandhu
12.	Shri RK Pandey, Businessman
13.	Shri Alok Dev, Deputy Director, Publicity
14.	Shri S.K. Mishra, Commissioner, Nagar Nigam
15.	Shri Amar Singh Chauhan, Sub-Engineer, Nagar Nigam

Public hearing at Bilaspur on 22.04.2009	
S.No.	**Name & Address**
1.	Shri Harish Kedia, President, CG Laghu & Sahayak Udyog Mahasangh,
2.	Shri Arun Agrawal, Past President, Jila Udyog Sangh, Bilaspur
3.	Shri CKB Bhatt, CG Laghu & Sahayak Udyog Mahasangh,
4.	Shri Sanjay Lalchandani, Proprietor, Lalchandani Chemical, Bilaspur
5.	Shri Prakash Dewangan, Proprietor, Shivam Rice Mill, Bilaspur
6.	Shri Gopal Mukherjee, President, Rajkishore Nagar Samanavay Samiti, Bilaspur
7.	Shri B.K. Mullock, Rajkishore Nagar Samanavay Samiti, Bilaspur
8.	Shri B.P. Choubey, Rajkishore Nagar Samanavay Samiti, Bilaspur
9.	Shri C.K. Jain, Proprietor, M/s Nylocone Inausommision,
10.	Shri Sanjay Gupta, Secretary, Jila Udyog Sangh
11.	Shri S.K. Mishra, Ex-Secy, CLSUS
12.	Shri V.K. Agrawal, Secretary, Agrawal Minerals
13.	Shri R.D. Agrawal, Secretary, DIA
14.	Shri Praveen Ch. Jha, Director, Phil Minerals, Bilaspur
15.	Shri Arun Kr. Kedia, CCM, Phil Minerals, Bilaspur
16.	Shri Sudhir Ranjan, Chief Electrical Engineer (Traction), SEC Railway
17.	Shri Yogesh Partaity, Sr. Divn. Electrical Engineer, SEC Railway

LIST OF OFFICERS FROM CSPGCL, CSPTCL & CSPDCL WHO ATTENDED THE PUBLIC HEARINGS

1.	Shri G S Deshpandey, MD, CSPDCL, Raipur
2.	Shri A.K. Tiwari, CE (RR), CSPDCL, Raipur
3.	Shri R.K. Pandey, CE (O&M), CSPDCL, Raipur
4.	Shri L.S. Chawla, CE (Comml.), CSPDCL, Raipur
5.	Shri N.S. Kumar, SE, CSPDCL, Raipur
6.	Shri Vivekanand Pandey, SE, CSPDCL, Raipur
7.	Shri Arun Bhatnagar, SE (RAC), CSPDCL, Raipur
8.	Shri G.C. Mukherjee, SE, CSPDCL, Raipur
9.	Shri J.R. Patel, SE (Durg), CSPDCL,
10.	Shri P.K. Khare, Addl. SE, CSPDCL, Raipur
11.	Shri M.S. Khan, EE, CSPGCL, Raipur
12.	Shri S.G. Oak, EE, CSPDCL, Raipur
13.	Shri Vinay K Pandey, EE, CSPGCL, Raipur
14.	Shri R A Pathak, EE, CSPDCL, Raipur
15.	Shri Sandeep Shukla, AE, CSPGCL
16.	Shri Rahul Sachdev, CSPDCL, Raipur