



# **KERALA STATE ELECTRICITY REGULATORY COMMISSION**

## **ORDER ON ARR & ERC FOR 2008-09**

**Petition No. TP 34/2007 of KSEB**

**APRIL 19, 2008**

# KERALA STATE ELECTRICITY REGULATORY COMMISSION

## Thiruvananthapuram

Present : Shri. C. Balakrishnan, Chairman  
Shri. C. Abdulla, Member  
Shri. M. Aiyappan, Member

**Petition No. TP-34 of 2007**

**In the matter of ARR & ERC of Kerala State Electricity Board for 2008-09**

**April 19, 2008**

Kerala State Electricity Board : Petitioner

### **O R D E R**

The Kerala State Electricity Regulatory Commission having scrutinized the petition on ARR and ERC for 2008-09 (TP 34 of 2007) filed by the Kerala State Electricity Board *vide* letter No.KSEB/TRAC/TF06/587 dated 21-12-2007, considered the written objections filed by the stakeholders, consulted the State Advisory Committee on 2-2-2008, considered the subsequent written and oral submissions of the KSEB, heard the views of objectors on 04-03-2008 at Thiruvananthapuram and on 06-03-2008 at Ernakulam and having considered other documents and materials on record, passes the following Order in exercise of the powers vested in it under the Electricity Act, 2003, on this behalf.

Sd/-

M.P. Aiyappan  
Member

Sd/-

C. Abdulla  
Member

Sd/-

C. Balakrishnan  
Chairman

Authenticated copy for issue

Secretary

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# CHAPTER 1

## INTRODUCTION

### 1.1 Preamble

Kerala State Electricity Board (hereinafter referred to as KSEB or the Board) in accordance with the KSERC (Tariff) Regulations 2003, filed the Aggregate Revenue Requirements (ARR) and the Expected Revenue from Charges (ERC) for FY 2008-09 before the Commission on 21-12-2007. Before filing the petition, the Board vide its letter No. KSEB/TRAC/TF 06/550 dated 29-11-2007 had requested extension of time till 31-12-2007 for filing the ARR for 2008-09 stating that the revision of tariff was effected from 1-12-2007 vide Order of the Commission dated 26-11-2007 and its impact of the Order of the Commission was to be assessed for the ensuing year. The Commission considered the request of the Board and vide letter dated 4-12-2007 granted extension of time till 21-12-2007 and directed the Board to file a detailed status of compliance of directions issued by the Commission so far, along with the ARR & ERC. Accordingly, the Board filed the ARR petition on 21-12-2007. The Board has stated that, it was not in a position to file the tariff petition for bridging the revenue gap as it had to be in tune with the socio-economic policies of the State Government for which a detailed consultation with the State Government was necessary.

The Board has stated that the petition was filed in accordance with Section 61 of the Electricity Act 2003 and KSERC (Tariff) Regulations, 2003. It is further stated that, the relevant provisions of the Indian Electricity Act 1910, the Electricity (Supply) Act, 1948 and the Electricity Regulatory Commissions Act 1998, which are not contradictory to the Electricity Act, 2003, were also taken into consideration while preparing this petition. It was also mentioned in the petition that, as per Letter No. 25/11/2004–R&R dated 6<sup>th</sup> December 2007, Government of India and Government of Kerala had mutually agreed upon to continue the Board as a State Transmission Utility and a licensee till 9.6.2008.

The Board has been filing the ARR & ERC petitions regularly from 2003-04. The Commission so far has issued five Orders on ARR & ERC of the Board starting from 2003-04. The ARR & ERC for FY 2003-04 was submitted by the Board on August 1, 2003 and the Commission issued the Order on 31-12-2003 approving an ARR of Rs. 3697.37 Crore and total revenue of Rs.3141.37 Crore, leaving a gap of Rs. 556.46 Crore. The Commission recommended the gap to be bridged by way of exemption from payment of duty amounting to Rs.182.56 Crore to the Government and availing a subsidy of Rs. 375 Crore from Government. The Board submitted the ARR for the year 2004-05 on 15-12-2003 showing a revenue gap of Rs. 854.19 Crore. The Commission in its order dated 16-4-2004 approved an ARR of Rs.3492.46 Crore and a total revenue of Rs.3196 Crore, leaving a gap of Rs. 296.46 Crore for 2004-05. The Commission recommended to the Government to exempt the Board from paying electricity duty under Section 3(1) and Section 4 of Kerala Electricity Duty Act, 1963 to the tune of Rs.200 Crore and to provide the balance amount of Rs.96 Crore by way of revenue subsidy.

The ARR & ERC for the year 2005-06 submitted on November 15, 2004 showed a revenue gap of Rs.492.25 Crore. The Commission vide its order dated March 23, 2005 approved an ARR of Rs.3367.32 Crore and a total revenue of Rs.3316.01 Crore, leaving a gap of Rs.51.31 Crore for 2005-06. The Commission approved for the continuation of the existing tariff and other charges by KSEB for FY 2005-06, as the approved revenue gap of Rs.51.31 Crore was less than 2% of the total revenue requirements.

The ARR& ERC for the year 2006-07 was submitted on November 30, 2005 showing a revenue requirement of Rs.3997.51 Crore and a total revenue of Rs.3694.73 Crore from existing tariff and non-tariff income, leaving a revenue gap of Rs.302.78 Crore. The Commission approved an ARR of Rs.3680.43 Crore and a total revenue of Rs.3865.06 Crore with a surplus of Rs.184.63 Crore.

The ARR & ERC for the year 2007-08 was submitted on 11-12-2006 showing a revenue requirement of Rs.4545.02 Crore and a total revenue of Rs.4114.91

Crore from sale of power and from non-tariff income, leaving a revenue gap of Rs.430.11 Crore. The Commission approved a revenue requirement of Rs.4074.22 Crore with total revenue of Rs.4403.95 Crore, resulting in a revenue surplus of Rs.329.72 Crore. In the mean time Board submitted a petition for truing up of revenue and expenses for 2003-04 and 2004-05. The Commission disposed off both the petitions together by allowing to recover an amount of Rs.360.06 Crore as a result of truing up, through tariffs, which was adjusted against the revenue surplus for 2007-08, thus, leaving a net gap of Rs.30.34 Crore. Based on the petition filed by the Board for revision of tariff, the Commission vide its order dated 26-11-2007 revised the tariffs with effect from 1-12-2007. The impact of tariff revision was an estimated increase in revenue to the tune of Rs.69.79 Crore for a full year and Rs.23.26 Crore for the balance four months of 2007-08.

## **1.2 Procedural overview**

In the ARR for FY 2008-09 the Board has projected a revenue requirement of Rs.5734.03 Crore and a revenue receipt of Rs. 4979.34 Crore by leaving a revenue gap of Rs.754.69 Crore. The Commission in its meeting held on 31-12-2007 decided to accept the petition as TP34/2007, and issued an instruction vide letter dated 3-1-2008 to KSEB for publishing the summary of the petition in the leading dailies, inviting comments from the stakeholders. The Commission also sought clarifications on the petition vide letter dated 8-1-2008 by directing the Board to furnish the same on or before February 1, 2008 and publish the summary by 25-1-2008 for the information of the public. The Board vide letter dated 28-1-2008 forwarded the draft summary of the petition for approval. The Commission approved the summary with necessary modifications, and communicated the approval vide letter dated 30-1-2008. The Commission also forwarded a time frame for processing the ARR petition vide letter dated 30-1-2008 to the Board.

The summary of the filing was published in the following dailies, giving time till February 22, 2008 for the stakeholders to submit objections and suggestions.

- Kerala Kaumudi 9-2-2008
- Deshabimani 9-2-2008
- The New Indian Express 9-2-2008
- The Hindu 10-2-2008

It was stated in the publication that, the Board should provide all supporting information relating to the petition if requested for by the stakeholders, as indicated in the Petition. The copies of the petition were made available to the public at a cost of Rs.250/- per copy. The dates of public hearings were also mentioned in the publication.

The Commission placed the petition in its website and also circulated it among the members of the State Advisory Committee for their comments. The State Advisory Committee met on 2-2-2008 to discuss the ARR petition filed by the Board. The minutes of the meeting of the State Advisory Committee held on 2-2-2008 is shown as Annexure – I.

The Commission also issued press release to inform all stakeholders about the public hearings on the ARR & ERC of the Board for 2008-09. Though the Commission had directed the Board to furnish details on the clarifications sought by the Commission by 1-2-2008, the Board forwarded the reply only on 28-3-2008, vide their letter No.KSEB/TRAC/TF-06/215.

The Commission vide its letter dated 29-2-2008 forwarded the copies of the objections filed by the public for the reply of the Board. Again on 19-3-2008, another set of objections received during the public hearings were forwarded to the Board for reply. The list of persons who filed objections on the petition is shown as Annexure –II. The Board has forwarded the reply to the objections vide letter dated 16-4-2008 which is shown as Annexure - III

### **1.3. Public Hearing**

Public hearing on the matter was held in two places, at the Commission's Office, Thiruvananthapuram on 4-3-2008 and at the Y.M.C.A.Hall, Ernakulam on 6-3-2008.



The list of persons who attended the Public Hearings is shown as Annexure IV (a) and IV (b). In the public hearing held on 4-3-2007, Member (Finance) of the Board requested permission of the Commission for filing the proposal for bridging the revenue gap and the Commission vide letter dated 7-3-2008, asked the Board to file the proposal. In reply, the Board in its letter dated 17-3-2008, suggested that the Commission may decide the ways to bridge the revenue gap for the year 2008-09 by way of tariff revision or subsidies from government or maintaining it as regulatory asset and communicate the decision to the State Government and KSEB. The Board also mentioned that tariff proposal could not be submitted since the Commission has not proposed a road map for the reduction of cross subsidy.

It is pertinent in this juncture to comment on the letter dated 17-3-2008 from the Board. As a licensee, the Board has to function within the framework of the provisions of the Act, Regulations and conditions of licence. When ARR is submitted with estimated revenue gap, as a licensee, the Board is duty bound to propose how they are going to manage the gap, either by efficiency improvement measures or through increase in tariff. The contention of the Board that, Commission should decide on the ways to meet the revenue gap, is apparently without comprehending the principles of regulation. The difference if arises between ARR submitted by the Board and the ARR approved by the Commission, is mainly on account of the unrealistic projections of the Board and the excess expenditure projected which is more than what can reasonably be passed on to the consumers. The Board is well aware that State Government had issued directions under Section 108 of the Electricity Act, 2003 that cross subsidy ratio has to be maintained at the same level. Further, the matter is before the Hon. High Court of Kerala, in which the Board is also a party. Since the matter is in *sub-judice*, the points made by the Board is not appropriate.

#### **1.4 Other objections:**

The Kerala HT and EHT Industrial Electricity Consumers' Association has pointed out that, KSEB failed to follow the regulation of the Commission by not

filing the MYT proposal. They have pointed out that the direction of the Commission was issued in the Order for 2007-08. The objector also stated that MYT regime has to be followed since it provides for incentives and disincentives and delay in filing the same would be against the principles of efficiency improvement. The Association also pointed out that KSEB has not provided separate details for Generation, Transmission and Distribution. Further, there was no tariff filing done by the Board along with ARR petition. Cochin Kagaz, Sud Chemie Employees Federation, Cominco Binani Zinc employees Union, Save FACT Action Committee, Standing Committee of Trade Unions, GTN Workers Federation, Always Textiles Employee's Association, Shree Sakthi Paper Mills Limited, District Textile Labour Union, GTN Textiles Limited, Cominco Binani Zinc Employees Association, Sud Chemie India (P) Limited, Carborandum Universal Employees Union, TCC Employees Associations etc., have also expressed similar opinions.

The Commission is of the opinion that, filing of MYT petition need not be insisted as the Board is still functioning as a single entity as per the Government of India Order till 9-6-2008. The same has to be filed once the unbundling process as envisaged in the Act is completed by the Board.

By considering all the statutory provisions and after going through all the steps envisaged under the Act and the Regulations, considering the views of the State Advisory Committee, by giving sufficient opportunity to all stakeholders, heard the views of the Board and the stakeholders during the public hearing in detail, the Commission has decided on the ARR & ERC of the Board for 2008-09 in the following chapters.

## CHAPTER – 2

### ENERGY SALES PROJECTIONS

#### 2.1. Sales projections

Energy sales projected by the Board for 2008-09 is 13261 MU which is 1021 MU higher than the estimated sales for 2007-08. The overall projected growth rate of sales over previous year is 8.4%. The growth rate of sales for 2006-07 was 10.33% where as revised the growth rate for 2007-08 is 8.0%. The growth of sales to LT consumers are expected at the same level as 2007-08, where as the industrial consumption is expected to increase considering the efforts taken by the government, such as revival of sick and closed industrial units, policy initiatives towards setting up of new industries etc.

#### Energy Sales projected by the Board

Consumer Category	2006-07 (Actual) (MU)	2007-08 (Revised Estimate) (MU)	2008-09 (Estimate) (MU)
Domestic	5213	5684	6200
Commercial	1246	1420	1610
Industrial	934	998	1065
Agriculture	220	225	235
Public Lighting	229	250	270
<b>Total LT</b>	<b>7842</b>	<b>8577</b>	<b>9380</b>
HT I Industrial	1436	1460	1517
HT II N I and N C	135	148	155
HT III Agriculture	9	9	10
HT IV Commercial	431	497	560
EHT 66/110 kV	1070	1076	1130
Railways	72	104	115
Bulk supply	335	364	394
<b>Total HT</b>	<b>3489</b>	<b>3658</b>	<b>3881</b>
<b>Total</b>	<b>11331</b>	<b>12235</b>	<b>13261</b>

The Board has stated that consumer category wise consumption of energy was estimated on the basis of actual data on consumers, consumption and connected load during the previous years. Further yearly growth of consumers, regional characteristics of consumers, seasonal variations and change in consumer habits were also considered for the projections. Actual growth in number of consumers and month wise consumption in each category of consumers during the previous year and the first half of the current year were considered for projecting consumption for the ensuing year. As the estimation based on this method was reasonably accurate in the previous years, the same method is adopted for this year also.

## **2.2 Deliberations in the Advisory Committee**

Mr. Ravindran Nair, CONTIPS, opined that industrial HT and EHT sales in the state are stagnant over the years. The sales to railways would be increased since the electrification was complete and more trains would be running on electric traction.

## **2.3 Objections of stakeholders**

The Kerala HT and EHT Industrial Electricity Consumers' Association has stated that KSERC (Terms and Conditions of Tariff for Retail Sale of Electricity) Regulations stipulate the principle to be adopted for sales forecast, which was not considered by the Board. The Board has projected the sales on an adhoc basis without sound reasoning. In support of these, the objector pointed out the observations in the Commission's Order for 2006-07. Regarding HT & EHT sales, the actual growth between 2005-06 and 2006-07 is 5.44% for HT and 6.6% for EHT, whereas the Board considered only 1.65% and 0.56% for HT and EHT respectively for 2007-08. According to the objector, growth rate for LT category should be same as that approved by the Commission for 2007-08 ie., 8.82%. They have also raised the question whether the additional sales booked through theft detection is added to the sale or not. Binani Zinc in its objections

stated that growth rate projected by the Board is not realistic as no new industry was established in the State, Hence an increase of 7% would be more reasonable, which would reduce the energy requirement for 2008-09. Similar views were expressed by MRF Limited, Kerala Chemicals and Proteins Limited. Shri. A.R.Satheesh, Carborandum Universal Limited argued that the Board has not provided the details of category wise number of consumers in the ARR filing.

#### **2.4 Analysis and decision of the Commission**

The Board has projected 8.4% growth in overall sales for the year 2008-09 in relation to the previous year. This is slightly higher than that of last year (2007-08-revised estimates) and much lower than 2005-06 and 2006-07. An analysis of growth pattern over the past five years also shows a disturbing long term trend, which will have serious implications in the Kerala power system. LT level sales are growing higher than the overall growth, where as HT sales remain stagnant. As a reflection of the increasing expansion of the service sector in the economy of Kerala, the commercial sector sales both in HT and LT are increasing (about 13%) at a level higher than the overall average rate of growth. The disturbing fact is that the industrial sales, both in the HT and LT are stagnating at 7%. Alarmingly, the HT industrial growth from 2003-04 is deteriorating where as at the EHT level it shows a negative trend. The domestic sector, like commercial sector drives the overall growth. The long term implication of these trends would be stagnation of base load and increase in peak load, which increases the difference between average load and peak load. Hence a concerted effort on the part of the Board is required to raise the base load through promotional measures. The Commission expects suitable incentive proposals from the Board in this respect.

**Categories with higher than average growth in 2008-09**

	2004-05	2005-06	2006-07	2007-08	2008-09	Compounded growth (2004-05 to 2007-08)
<b>LT</b>						
Domestic	6.4%	9.5%	11.7%	9.0%	9.1%	9.2%
Commercial	7.8%	15.3%	14.0%	14.0%	13.4%	12.7%
Public Lighting	10.2%	13.5%	10.1%	9.3%	8.0%	10.8%
<b>HT</b>						
HT IV Commercial	11.5%	11.5%	14.1%	15.3%	12.7%	13.1%
Railways	-4.3%	31.7%	24.5%	44.1%	10.6%	22.6%

**Categories with lower than average growth in 2008-09**

<b>LT</b>						
Industrial	4.3%	11.6%	6.9%	6.9%	6.7%	7.4%
Agriculture	-5.4%	-0.7%	16.2%	2.2%	4.4%	2.7%
<b>HT</b>						
HT I Industrial	10.0%	10.1%	5.4%	1.6%	3.9%	6.7%
HT II N I and N C	8.5%	-7.7%	3.6%	9.9%	4.7%	3.3%
HT III Agriculture	0.0%	6.0%	-1.9%	-3.8%	5.6%	0.0%
Bulk supply	12.8%	39.7%	13.3%	8.5%	8.2%	18.0%

Most of the objectors in general were of the opinion that the Board has used simple techniques for sales forecast. However, if we analyse the past forecast of the Board, the margin of error is not substantially high. This however provides no excuse for the Board for not furnishing long term forecasts with sufficient level of reasoning and with a sensitivity analysis. It is imperative that the Board has to work out a long term forecast with annual updation, as many development projects are coming in the State, reasonably accurate long term forecast is essential for planning the generation requirements of the Board to meet the increased demand. In the case of EHT, the Board is expecting 5% growth. However, from 2005-06, consumption of this sector is almost stagnant. Further, the Board has not mentioned any addition of new consumers in this category.

### Growth rate of sales

Categories	Annual Growth Rates					CAGR
	2004-05	2005-06	2006-07	2007-08	2008-09	(2004-05 to 2007-08)
Domestic	6.4%	9.5%	11.7%	9.0%	9.1%	9.2%
Commercial	7.8%	15.3%	14.0%	14.0%	13.4%	12.7%
Industrial	4.3%	11.6%	6.9%	6.9%	6.7%	7.4%
Agriculture	-5.4%	-0.7%	16.2%	2.2%	4.4%	2.7%
Public Lighting	10.2%	13.5%	10.1%	9.3%	8.0%	10.8%
<b>Total LT</b>	<b>6.1%</b>	<b>10.4%</b>	<b>11.5%</b>	<b>9.4%</b>	<b>9.4%</b>	<b>9.3%</b>
HT I Industrial	10.0%	10.1%	5.4%	1.6%	3.9%	6.7%
HT II N I and N C	8.5%	-7.7%	3.6%	9.9%	4.7%	3.3%
HT III Agriculture	0.0%	6.0%	-1.9%	-3.8%	5.6%	0.0%
HT IV Commercial	11.5%	11.5%	14.1%	15.3%	12.7%	13.1%
EHT 66/110 kV	-6.5%	-3.1%	6.6%	0.5%	5.0%	-0.7%
Railways	-4.3%	31.7%	24.5%	44.1%	10.6%	22.6%
Bulk supply	12.8%	39.7%	13.3%	8.5%	8.2%	18.0%
<b>Total HT</b>	<b>3.7%</b>	<b>7.3%</b>	<b>7.7%</b>	<b>4.8%</b>	<b>6.1%</b>	<b>5.9%</b>
<b>Total</b>	<b>5.3%</b>	<b>9.4%</b>	<b>10.3%</b>	<b>8.0%</b>	<b>8.4%</b>	<b>8.2%</b>

As pointed out by the objectors, the Board has not provided comprehensive database on sales for analyzing the veracity of the projections. The Commission in all its previous orders had directed the Board to improve the methods of load forecast, which has not materialized so far. Considering the fact that the previous annual forecasts were not far different from the projections and by taking into consideration the limitation of availability of data, Commission is inclined to accept the projections of the Board with out any modification.

## CHAPTER – 3

### TRANSMISSION AND DISTRIBUTION LOSS

#### 3.1 Introduction

KSEB in its petition has stated that in between 2001-02 and 2006-07, T&D loss (including external loss in PGCIL system) was reduced by 8.71%, ie., on an average of 1.74% per annum. During the same period the internal loss was reduced from 30.76% to 21.47%, which is about 1.86% per annum.

#### Loss reduction achieved by the Board

Year	External loss	Extend of reduction	Internal loss	Extend of reduction
	(%)	(%)	(%)	(%)
2001-02	32.15		30.76	
2002-03	30.41	1.74	29.08	1.68
2003-04	28.46	1.95	27.44	1.64
2004-05	26.22	2.24	24.95	2.49
2005-06	24.59	1.63	22.96	1.99
2006-07	23.43	1.16	21.47	1.49

KSEB has also stated that the losses in the transmission system are about 5%. The Board has narrated the steps taken to reduce the system losses, which include an ambitious target of adding one km of HT line in each section per month. In order to reduce the technical losses, the transmission lines and substations constructed and improvements carried out in the distribution sector during the past four years are as follows:

#### Investment Programme submitted by the Board

Year	2003-04	2004-05	2005-06	2006-07	2007-08 (projection)	2008-09 (Projection)
SUBSTATIONS (NOS)						
220kV	1	1	1	0	3	0
110 kV	6	8	4	2	11	11
66kV	3	2	4	3	1	4
33kV	7	15	10	10	31	26



Year	2003-04	2004-05	2005-06	2006-07	2007-08 (projection)	2008-09 (Projection)
LINES (kms)						
220kV	4.3	15	56		30.7	18.61
110 kV	154.6	30	55	30	114.75	134.8
66kV	8.4	5	13	15	36.99	14.64
33kV	95.4	157	131	95	170.5	309.07
11 kV lines	1269	955	1062	1820	2000	3000
LT lines	4429	6074	7441	8229	6000	6000
DISTRIBUTION TRANSFORMERS (NOS)	1063	1882	1751	2124	2000	2000

Further, the Board has stated in the petition that, in order to construct HT lines for improving the HT:LT ratio to the ideal level, about 68,000 ha of land is required, acquisition of which is difficult in the short span of time. Hence according to the Board, this would be a highly capital intensive work against innumerable collective and individual resistance at local levels. In the 11<sup>th</sup> plan, the Board targets to improve HT:LT ratio from present level of 1:6 to 1:4.

Regarding the commercial loss reduction also number of steps are suggested as mentioned in the previous petitions. The number of faulty meters replaced in the past years is as follows:

**Progress of faulty meter replacement**

Year	No. of Faulty meter replaced (Lakh)
2002-03	4.21
2003-04	8.67
2004-05	4.35
2005-06	6.38
2006-07	2.69
2007-08 (upto August 07)	2.52

During 2006-07 the anti power theft squad conducted 16221 inspections and Rs.12.73 Crore was assessed out of which Rs.11.04 Crore was realized. During

this year upto October 2007, 10,986 inspections were carried out and Rs.8.20 Crore was assessed and Rs.5.60 Crore was realized. In addition to APTS, the regional audit offices and the division and section squads also have assessed Rs. 38.58 Crore and Rs.11.77 Crore respectively from 2005-06 to 2007-08 (upto October) and realized Rs.17.62 Crore and Rs.7.96 Crore respectively.

Against the target of 6 lakhs for the year 2007-08, the Board has replaced 2.52 lakh meters upto August 2007. The targets for replacing faulty meter for 2008-09 would be 6 lakhs. Under APDRP scheme for cities, Thiruvanthapuram, Kochi and Kozhikode are included. RGGVY scheme was implemented in seven districts viz., Idukki, Palakkad, Malappuram, Kozhikode, Wayanad, Kannur and Kasaragod. Through these schemes, the loss reduction target for 2007-08 and 2008-09 would be 1.71% and 1.63% respectively.

### **3.2 Deliberations in the Advisory Committee**

Shri Rawther, while commenting on the performance of the Board, stated that many of the targets were not achieved such as faulty meter replacement, capital investment, new connections etc., Shri. Ravindran Nair suggested segregation of the T&D losses into technical and commercial loss. Representative of NTPC stated that, the reduction of T&D loss was a good sign. However, in the state of Andhra Pradesh the distribution losses were reduced to a level of 8 to 10% and other states are aggressively pursuing reduction in T&D loss. Similar efforts should be taken by KSEB also on a war footing.

### **3.3 Objections of Stakeholders**

The Kerala HT and EHT Industrial Electricity Consumers' Association in their objection stated that, the Board has never achieved the loss reduction targets fixed by the Commission. In fact for the year 2007-08, if the approved sales are considered the actual losses would be 19.55%, which is the same as the approved level of losses. Hence they suggested that based on the approved

loss for 2007-08 and the reduction of 1.63% proposed by the Board, the loss level for 2008-09 should be 17.92% in comparison with 18.49% proposed by the Board. Cominco Binani Zinc employees Union pointed out that the target of replacing the faulty meters to the tune of 4.32 lakh for the year 2007-08 itself reveals the present condition of meters in KSEB.

Carborandum Universal employees union alleged that the petition of KSEB did not show any effort to increase efficiency by reducing T&D loss. KDHPCP stated that the Board has provided the target of replacing 6 lakh meters without stating the number of meters that are actually faulty in the system.

#### **3.4. Analysis and decision of the Commission**

Loss reduction target is a major performance parameter which the Board has to concentrate. The estimate of the benefit of reduction in loss has been given in the petition itself. Like the previous years, the Board could not meet the target for replacing the faulty meters. As rightly pointed out by KDHPCPL, the Board has not provided the details of number of meters that are actually faulty. The Commission directs that, in the next filing of the Board, consumer category wise information on the status of faulty meters is to be provided.

As per the Board's filing, HT:LT ratio is to be improved to 1:4 during the plan period. However, the argument that the acquisition of 68,000 ha. of land is required for laying HT lines by the Board for ideal HT:LT ratio appears to be strange and far from reality. The present practice of the Board is to obtain only right of way, than acquiring land for drawing HT lines.

The Board has not so far furnished the details of separation of transmission and distribution losses. At present feeder meters up to 11 kV is available, the Commission is not in a position to comprehend why the Board is not providing voltage level loss figures. Further, in spite of repeated directions in the previous

orders that technical loss and commercial loss were to be separated based on the load flow studies, it has not been carried out.

As pointed out by the Objectors, the Board had neither achieved the loss reduction targets proposed by the Commission nor the targets proposed by the Board itself, as seen in the table.

**Loss reduction proposed, approved and actual**

Year	Proposed in ARR	Approved	Actual
	(%)	(%)	(%)
2005-06	2.72	2.72	1.99
2006-07	1.76	2.50	1.50
2007-08	1.83	2.00	1.36

In the first two ARR's the Commission had fixed a loss reduction target of 3%, but later reduced it to 2% in 2007-08. Though it is true that as the loss levels come down, further reduction of losses would be difficult, the non-achievement of target has to be properly explained. Even after being repeatedly pointed out by the Commission, the Board has not shown convincingly how the loss reduction targets proposed are going to be met. Though the capital investment plan is given, the extent of the targeted improvements due to the completion of the projects is never shown in the petitions.

The external loss is in the order of about 4% in the previous years and projection for 2008-09, is 4.27%. Though KSEB is not directly responsible for the external loss, it is imperative that, KSEB should take up this matter with the appropriate authorities to keep the same at a reasonable level.

**Details of external loss**

	Power Purchase	External loss (Actuals)	
	(MU)	(MU)	%
2001-02	5676.82	255.06	4.5%
2002-03	7320.37	238.81	3.3%
2003-04	8015.41	174.50	2.2%
2004-05	5390.74	214.93	4.0%
2005-06	6700.27	287.64	4.3%
2006-07	8149.84	370.11	4.5%
2007-08 (Revised)	7854.41	315.91	4.0%
2008-09	7817.72	334.00	4.27%

The loss level projected for 2008-09 is 18.49%, which is 1.63% lower than the revised estimate of loss for 2007-08.

**Total internal loss in KSEB system**

	Energy input in KSEB System (MU)	Internal Loss (MU)	Internal loss (%)
2001-02	12518	3851	30.76%
2002-03	12512	3639	29.08%
2003-04	12281	3370	27.44%
2004-05	12505	3120	24.95%
2005-06	13331	3061	22.96%
2006-07	14428	3097	21.47%
2007-08	15318	3079	20.11%
2008-09 (projected)	16266	3005	18.49%

The Commission in its order had fixed a loss level of 19.55% for 2007-08, which is 2% lower than the estimated loss for 2006-07. In the same manner, if 2% reduction is envisaged, the loss level for 2008-09 would be 17.55%. However, the loss reduction proposed by the Board for 2008-09 is 1.63%. Further, it should be noted that, the Board has not met the targets fixed by the Commission

in its previous orders. The Board in the previous occasions had commented that the loss targets fixed by the Commission are too ambitious and could not be achieved in the short span of time. Considering these, the Commission feels that, for the year 2008-09, the loss reduction target of the Board for the year 2008-09 may be accepted so that, the onus will be on the Board to achieve the target fixed by themselves. Hence, Commission envisages a loss reduction target of 1.63% compared to the approved level of loss for 2007-08. Accordingly the energy requirement in the KSEB system would be as follows:

	<b>ARR</b>	<b>Approved</b>
Energy sales (MU)	13261	13261
Internal loss (%)	18.48	17.92
Net Energy input to KSEB system (MU)	16266	16156
Loss reduction (%)	1.63	1.63

The Commission also notes that the loss levels in the KSEB system have been reduced to a considerable extent from about 30% in 2003-04 to about 21% in 2007-08 as per the estimates of the Board. T&D loss consists of technical and commercial losses and the technical losses can be reduced only with proper investments and non-technical losses by increasing billing efficiency and plugging theft and other losses. As per CEA estimates, the ideal level of technical loss would be about 15%. The lower level of losses in the Board's system is an indication that the commercial losses must have been reduced to a much lower level. It is now imperative that separation of losses is necessary so as to identify areas of improvements in reducing the technical losses. Hence the Board has to take steps to file report on the load flow studies on technical losses in the system.

### Energy Loss Statement

Sl No.	Items	2008-09 (Estimate)	2008-09 (Approved)
1	KSEB's own Generation		
1.(a)	Energy generated (MU)(gross incl. Hydro, Wind, KSEB thermal))	7835.33	7835.33
1.(b)	Aux . Consumption	45.41	45.41
1.( c)	Net energy generation	7789.92	7789.92
2	Power Purchase		
	Power purchase from IPPs	1287.09	1176.89
	Power purchase from CGS (including ex.loss)	7817.72	7817.72
2.(a)	Total Power purchase (MU) at Generator Bus (inclu. Ext. loss)	9104.80	8994.60
2.(b)	External PGCIL Line Loss	334.18	334.18
2.( c)	Net Power purchase at KSEB bus 2(a) - 2 (b)	8770.62	8660.42
3	Total energy generated and power purchased by KSEB 1(c) + 2(a)	16894.72	16784.52
4	External Energy sales (displacement mode)	294.63	294.63
5	Total Energy generated & purchased for KSEB for sale within the state (3)- (4)	16600.09	16490.00
6	Energy sales within the state	13260.60	13261.00
7	Total energy loss including PGCIL line loss(MU) = (5)- (6)	3339.49	3229.00
8	Total energy Loss (incl. PGCIL Line losses) in percentage - (7)/(5)	20.12%	19.60%
9	Extent of Reduction (%)	1.61%	
10	Energy generated and Power purchase to the KSEB system (excl. external loss) 1(c) + 2(c)- 4	16266.00	16156.00
11	Energy loss in the KSEB system (internal) (MU): (10)-(6)	3005.30	2895.00
12	Internal energy loss (within KSEB system) (%) : (11)/(10)	18.48%	17.92%
13	Extent of Reduction of T&D loss within KSEB system (%)	1.63%	1.63%

Till the last order, the Commission had limited the scope to T&D loss only. However, AT&C loss captures the collection efficiency also. The Board has filed the details of collection efficiency achieved for the year 2006-07. The total demand for that year was Rs.4073.30 Crore whereas the collection was Rs.3985.60 Crore indicating the collection efficiency as 97.85%. However, the Commission has repeatedly pointed out that the amount collected against the current demand has to be separated to know the actual collection efficiency. It is obvious that the collection efficiency furnished by the Board would be lower if collection against current demand is considered. Based on figures submitted by the Board, the AT&C loss is worked out as follows:

T&D loss for 2006-07	21.47%
Collection efficiency	97.85%
AT&C loss	23.16%

As shown above, the Board has maintained collection efficiency (including arrears for previous years) of about 98% in 2006-07. The Commission directs that the Board shall file consumer category wise collection efficiency against current demand in the next filing onwards. The Commission fixes the target of 98% collection efficiency for 2008-09 against the current demand.

**In this connection, the Commission issues following directives to the Board for compliance.**

1. The Board while filing the petitions in future shall provide separation of technical and commercial loss
2. Separate estimates of voltage level transmission losses shall be provided
3. The Board shall prepare a plan for complete replacement of faulty meter and monitor its compliance closely.



## CHAPTER – 4

### REVIEW OF CAPITAL EXPENDITURE

#### 4.1. Introduction

The Board has stated that, in order to meet the target of electricity supply to all, it was planning to add 608 MW of power during the 11<sup>th</sup> Plan period. The Board also entered into a MoU with Orissa Hydro Power Corporation and Gujarat Power Corporation Limited on 12-11-2007 for the formation of a special purpose vehicle for development of mines and mining of coal from Bitarani coal block. The Board has identified energy loss in the system as the major area of concern.

#### 4.2 Review of capital expenditure for 2007-08

The Board has proposed Rs.1022.38 Crore in the ARR for 2007-08, which was revised to Rs.953.17 Crore subsequently. The revised allocation is as follows:

**Capital Outlay for 2007-08**

Particulars	(Rs. Crore)	
	As per ARR 2007-08	Revised
Generation	336.22	344.53
Transmission	221.8	221.5
Distribution	464.36	386.09
Other works		4.05
<b>Total</b>	<b>1022.38</b>	<b>956.17</b>

The revised allocation for ongoing projects in Generation is Rs.196.55 Crore. Further, for new schemes and renovation and modernization Rs.39.05 Crore and Rs. 12.05 Crore respectively are provided. Revised allocations are: Panniyar rehabilitation Rs.10 Crore, Dam safety Rs.2.10 Core, initial expenses towards

formation of SPV for Baitarni Rs.10 Crore, fabrication Rs.46.25 Crore and survey and investigation Rs. 1 Crore.

In transmission and distribution, the revised allocations are Rs.221.50 Crore and Rs.386.09 Crore respectively. The Board did not furnish the progress of capital works in the ARR. As per the performance report of the Board for generation (for major schemes and small hydel) out of the total allocation of Rs.155.05 Crore, the expenditure was only Rs.12.59 Crore ie., only 8.1% upto January, 2008. In the transmission sector, the progress was slightly better, which is 68.46%. The cumulative achievement for construction of 11kV lines was only 40% ie., as against the targeted figure of 3427 km, only 1368 km could be achieved. Regarding transformer installation, against the target of 2009 transformers, 1960 nos were already installed. The progress as on January 2008 is as follows:

**Progress of Capital works as on January, 2008 (Rs. Crore)**

	Budget	Expenditure upto January,08	Achievement
Generation	319.87	41.41	13%
Transmission	221.8	184.03	83%
Distribution	464.36	193.81	42%
Civil Fabrications	16.35	4.14	25%
Total	1022.38	423.39	41%

As is evident from the above that achieving targets on capital expenditure as planned would be difficult during 2007-08. Hence it would be imperative to reduce the allocation for capital expenditure for 2007-08 and consequently, the borrowings.

**4.3 Capital expenditure for 2008-09**

The Board has proposed Rs.1146.09 Crore as capital expenditure for 2008-09 as follows:

### Capital outlay for 2008-09

Particulars	Amount (Rs. Crore)
Generation	540.52
Transmission	181.00
Distribution	419.52
Other works	5.05
Total	1146.09

For on going projects in generation, Rs.279.05 Crore and for new schemes, Rs.111.95 Crore are allocated. For existing schemes, renovation and modernization, rehabilitation of Panniar scheme, Baitarni and for other works a total of Rs.104.41 Crore is allocated. In the transmission sector capital expenditure to the tune of Rs.181. Crore is planned which will include 18.61 km of 220 kV lines, 11 nos of 110 kV substations and 134.80 km of associated lines, 4 nos of 66 kV substations and 14.64 km of associated lines, 26 nos of 33 kV substations and 309.07 km of associated lines. In the distribution sector, Rs.419.52 Crore is allocated for construction of 3000 km of 11kV lines, 6000 km of LT lines, installation of 2000 nos distribution transformers and providing 4 lakh new connections. Of this, Rs.88 Crore is part of APDRP additional central assistance, Rs.24.92 for RGGVY schemes, Rs.40.56 Crore for Tsunami Emergency Assistance programme. The allocation for distribution is 8.5% more than the previous year allocation.

#### 4.4 Objections of Stakeholders

The Kerala HT and EHT Industrial Electricity Consumers' Association has pointed out that, Board had not explained how the capital investments proposed would meet its objectives. They suggested that the proposed investments should be accompanied by the cost benefits, detailed planning of investment, financing pattern etc., quoting the extract of the orders of the Commission and Regulations to substantiate the same. They stated that proposed investment pattern was irregular which showed lack of planning. Hence they requested to disallow the costs as the same was not backed by proper reasoning.

TCC, MRF and HNL stated that detailed working sheet on capital expenditure was not provided. Some of the other objectors also expressed similar opinions.

#### **4.5 Analysis and decision of the Commission**

A review of the progress of capital expenditure for the previous year shows a grim picture of achievement especially in the case of generation and distribution. Though the Board has proposed Rs.1146.09 Crore for 2008-09, it is very doubtful whether it would be achieved. However, considering the capital expenditure requirement in the system, the Commission allows the proposal of the Board. Further, the Commission has been consistently directing the Board to provide the cost-benefit analysis of the projects which are included in the capital expenditure plan, which was not complied with so far. Similar views were expressed by the stakeholders also. Considering the tardy progress made during 2007-08, the Commission feels that additional borrowing proposed by the Board for 2007-08 would not be required and hence interest cost need not be allowed in full for the present year. The Commission also feels that, a review of the progress of capital expenditure needs to be taken up, which is to be submitted within a couple of months from date of this Order. **The Commission while allowing the capital outlay as proposed by the Board reiterates that, the details called for in the previous orders are to be submitted to the Commission. A detailed implementation plan for various important projects may be prepared by the Board and critical review to be conducted monthly. The implementation plan shall be furnished to the Commission within a month.**

## CHAPTER – 5

### ANALYSIS OF ANNUAL REVENUE REQUIREMENTS

#### 5.1 Introduction

The Board has projected an Aggregate Revenue Requirement (ARR) of Rs.5734.03 Crore for 2008-09 including the statutory return of 14% on equity. The revised estimate of ARR for 2007-08 is Rs.4992.50 Crore. Thus the estimate for 2008-09 is about 15% more than the revised estimate of 2007-08. The details of expenses under different heads and the approach of the Commission are explained in the ensuing sections.

#### 5.2. Generation and Power purchase:

Total energy requirement for 2008-09 estimated by the Board is 16600 MU. The peak demand for the year would be 3081 MW. Ten year average (from 1998-99 to 2007-08) of annual water inflow is 6812 MU equivalent. Considering the better rain fall received during the year and anticipating normal inflow for the remaining months of 2007-08, KSEB plans to have hydel generation to the tune of 22.83 MU per day till May 2008. Based on the 10 year annual average inflow, it is expected that daily generation of 18.66 MU would be possible from June 2008 onwards. Thus total generation is estimated as (22.83 MU x 61 days + 18.66MU x 304 days) 7065.27 MU.

#### 10 year Average annual inflow (MU)

Year	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08*	Average
Annual inflow (MU)	8833	6289	6269	6735	4268	4509	6232	8519	7177	9291	6812

The Board also stated that the month wise daily hydel generation may fluctuate depending on the climatic conditions, variation in monthly and daily demand,

availability of generating machines, availability of power from other sources etc., The additional generation from new capacity additions ie., from Kuttiadi Additional extension, Neriamangalam extension, Kuttiadi tail race and Kuttiar diversion will be about 350 MU as follows:

#### New Hydel stations

Sl. No.	Name of the station	Installed capacity (MW)	Annual expected energy (MU)	Remarks
1	Kuttiadi Addl Extension	100.00	240.00	May 2008
2	Kuttiar diversion		37.00	to augment Idukki reservoir
3	Kuttiadi tail race	3.80	15.00	December 2007
4	Neriamangalam Extension	25.00	58.00	December 2007
	<b>Sub Total</b>	<b>128.80</b>	<b>350.00</b>	

Considering the auxiliary consumption of 0.5%, the total generation available from hydel stations expected by the Board is 7378.42 MU for 2008-09. As the cost of hydel generation is accounted elsewhere, the same is not included as part of generation costs.

The Board dispatches the diesel stations only during exigencies. However, for 2008-09, the Board is planning to operate 40 MW from BDPP and 60 MW from KDPP ie., about 131.68 MU from BDPP and 285.12 MU from KDPP. Based on the actual fuel cost from April 2007 to November 2007, the Board estimates that the variable cost would be Rs.5.17/kWh for BDPP and Rs.5.00/kWh for KDPP. The total generation cost from these plants is estimated to be Rs.206.43 Crore as follows:

#### Generation from Diesel Stations

Generating station	Gross Generation	Auxiliary Consumption	Net Generation	Variable cost	Total Variable cost
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs in Crore)
BDPP	131.68	2.63	129.05	5.17	66.72
KDPP	285.12	5.70	279.42	5.00	139.71
<b>Total</b>	<b>416.80</b>	<b>8.34</b>	<b>408.46</b>		<b>206.43</b>

### 5.2.1 Purchase of power

As stated in the petition, the present allocation from Central Generating Stations is as follows:

#### Allocation from CGS as on April 2007

Sl no.	Power Plant	Total capacity (MW)	w.e.f April 2007			
			Off-peak (0:00 hrs to 18:00 & 22:00 to 24:00 hrs)		Peak hrs (18:00 hrs to 22:00 hrs)	
			Percentage	(MW)	Percentage	(MW)
1	TALCHER - II	2000	21.35	427.0	21.35	427.00
2	NLCII - Stage I	630	10.00	63.0	10.46	65.90
3	NTPC (RSPTS)	2100	11.67	245.1	12.40	260.40
4	NTPC- RSTPS-NEW	500	12.20	61.0	12.95	64.75
5	NLCII - Stage II	840	10.71	90.0	11.17	93.83
6	NLC – Exp	420	16.36	68.7	16.36	68.71
7	MAPS	440	5.23	23.0	5.43	23.89
8	KAIGA	440	8.64	38.0	9.39	41.32
9	KAIGA - Stage-2	440	13.12	57.7	13.12	57.7
	<b>Total</b>	<b>7810</b>		<b>1074</b>		<b>1104</b>

The share of 150 MW of unallocated power from CGS to Kerala was reduced from April 2007 onwards. Ministry of Power, Government of India has allocated 180 MW of power from unallocated quota of Talcher II station to be pooled with RGCCPP power to keep the average cost of power at affordable levels. Earlier, the Board was not scheduling power from RGCCPP due to the high cost. Recently, Ministry of Power vide letter no 5/SR/CSA/GM/07 dated 21-3-2007 has directed that KSEB and TNEB shall ensure full utilization of RGCCPP power from November to June and also ensure 50% of the schedule from July to October every year. On this condition the allocation of cheap power of 180 MW was extended for a period of 6 months from 1-5-2007. The Board has stated that, CEA would review the situation and extension would be considered based on the utilization of RGCCPP. According to the Board, it is advantageous to avail the allocation of RGCCPP with equal quantum of power from Talcher II.

The Board has estimated the availability of energy from the central generating stations based on the CERC norms. The average availability expected from CGS is about 950MW from April to December 2008 and about 1100 MW from January 2009. The increased availability is due to the commissioning of Kudamkulam and NLC expansion stage II. The energy availability would be 19.53 MU per day upto December 2008 and about 22.84 MU from January 2009 onwards. The total power availability and the power purchase cost are as follows.

#### **Estimated Cost of Power Purchase from the CGS in 2008-09**

Sl No.	Source	Energy scheduled at generator bus	External loss	Net Energy input into KSEB system	Fixed cost	Variable cost	Total
		(MU)	(MU)	(MU)	(Rs.Crore)	(Rs.Crore)	(Rs.Crore)
1	Thalcher - II	2909.2	130.9	2778.3	213.4	200.7	419.2
2	NLC-II - Stage-1	400.4	18.0	382.4	11.8	51.7	75.2
3	NTPC- RSTPS	1687.1	75.9	1611.2	64.5	175.5	274.6
4	NTPC- RSTPS (New)	419.9	18.9	401.0	32.5	43.7	76.2
5	NLCII - Stage II	571.5	25.7	545.8	24.6	73.7	101.3
6	NLC - Exp	433.4	19.5	413.9	42.6	51.6	97.4
7	MAPS	136.9	6.2	130.8	26.6	0.0	28.1
8	Kaiga	228.0	10.3	217.8	68.2	0.0	70.2
9	Kaiga- Stg-II	341.3	15.4	326.0	102.1	0.0	102.1
10	NLC- Exp- Stage-II	108.9	4.9	104.0	10.0	13.0	23.0
11	Kudamkulam	189.5	8.5	181.0	61.6	0.0	61.6
12	UI	391.6		391.6		97.9	97.9
	<b>Total</b>	<b>7817.72</b>	<b>334.18</b>	<b>7483.54</b>	<b>657.89</b>	<b>707.65</b>	<b>1426.60</b>

#### **5.2.2. Power purchase from IPPs**

In addition to CGS, RGCCPP (180 MW), BSES (157 MW) and KPCL (20MW) are available to the State. The fixed cost commitments to these plants based on the past claims would be Rs.12.26 Crore for KPCL, Rs.96 Crore for BSES and Rs.101.46 Crore for RGCCPP. The average cost of power from BSES based on the past is about Rs.6.43/kWh and Rs.6.63/kWh for RGCCPP. For KPCL it is about Rs.5.14/kWh. However, the pooled cost of RGCCPP and 180 MW power from Talcher is worked out between Rs.4.50 to Rs.4.80/kWh depending on the dispatch. Based on this schedule, the power purchase cost from IPPs estimated by the Board is as follows:



### Cost of power purchase from IPPs

Source	Annual generation proposed (MU)	Fixed cost (Rs.Cr)	Variable cost (Rs.Cr)	Total (Rs.Cr)
KPCL	54.34	12.26	27.93	40.19
BSES	138.35	96.00	88.96	184.96
RGCCPP	1094.40	101.46	725.59	827.05
Total	1287.09	209.72	842.47	1052.19

The Board further proposes to avail 391.59 MU from unscheduled interchange at an average rate of Rs.2.50/kWh. While explaining the strategy for generation and power purchase, the Board has stated that it will strictly follow merit order dispatch, by fully utilizing hydel sources and by minimizing the use of costly thermal stations and by drawing power from CGS stations to the maximum extent possible. The merit order stack based on the variable cost of generation given by the Board is as follows:

### Merit Order Stack of different energy sources

Source	Estimated variable cost for 2008-09 (Rs/kWh)
Hydel	0.03
Talcher - II	0.69
NTPC- RSTPS	1.04
NTPC- RSTPS (New)	1.04
NLC - Exp	1.19
NLC- Exp- Stage-II	1.19
NLC-II - Stage-1	1.29
NLCII - Stage II	1.29
MAPS	1.94
Wind -Kanjikode	2.00
Kaiga	2.99
Kaiga- Stage-II	2.99
Kudamkulam	3.25
KDPP	5.00
KPCL	5.14
BDPP	5.17
BSES	6.43
Kayamkulam	6.63

### 5.2.3 Transmission charges

Transmission charges proposed by the Board, payable to PGCIL based on the actuals upto September 07 are as follows:

#### Transmission charges payable

SI No	Items	April-07 to Sept-07	Estimate for 2008-09
		(Rs. Crore)	(Rs. Crore)
1	Southern region Transmission Charges	67.24	137.48
2	ULDC Charges	6.25	12.78
3	NTPC Kayamkualm Transmission charges	16.15	32.3
4	Total		182.56

In addition to the above, income tax, incentives, water cess, foreign exchange variation, etc., are also payable to CGS stations. Based on the actuals billed in the past four years the Board projects the same as Rs.74.34 Crore.

Based on the above, the Board projects total internal generation cost (excluding the cost of hydel stations) as Rs.207 Crore, Power purchase cost as Rs.2674.65 Crore, thus totaling to an amount of Rs.2881.67 Crore. Summary of total generation and power purchase cost proposed by the Board is as follows:

#### Internal generation and Power purchase proposed by KSEB

Source	Energy Produced /Purchased	Auxiliary Consumption	External Loss	Net Energy Input to KSEB system	Fixed Cost	Incentive, Tax, etc.	Variable cost	Total Cost
	MU	MU	MU	MU	Rs. Cr	Rs. Cr	Rs. Cr	Rs. Cr
<b>KSEB Internal</b>								
Hydel	7415.53	37.08		7378.5				
Wind -Kanjikode	3.00	0.00		3.0			0.6	0.6
BDPP	131.68	2.63		129.0			66.7	66.7
KDPP	285.12	5.70		279.4			139.7	139.7
Sub total	7835.33	45.41		7789.9			207.0	207.0
<b>Power purchase</b>								
Thalcher – II	2909.19		130.91	2778.28	213.40	5.04	200.73	419.18
NLC-II - Stage-1	400.40		18.02	382.38	11.84	11.66	51.65	75.16
NTPC- RSTPS	1687.09		75.92	1611.17	64.50	34.61	175.46	274.57
NTPC- RSTPS (New)	419.86		18.89	400.96	32.54	0.00	43.67	76.21
NLCII - Stage II	571.48		25.72	545.77	24.62	2.94	73.72	101.29
NLC – Exp	433.38		19.50	413.88	42.56	3.22	51.57	97.36

Source	Energy Produced /Purchased	Auxiliary Consumption	External Loss	Net Energy Input to KSEB system	Fixed Cost	Incentive, Tax, etc.	Variable cost	Total Cost
	MU	MU	MU	MU	Rs. Cr	Rs. Cr	Rs. Cr	Rs. Cr
MAPS	136.94		6.16	130.78	26.57	1.56	0.00	28.13
Kaiga	228.04		10.26	217.78	68.18	2.01	0.00	70.19
Kaiga- Stg-II	341.35		15.36	325.99	102.06		0.00	102.06
NLC- Exp- Stage-II	108.86		4.90	103.97	10.02		12.95	22.97
Kudumkulam	189.54		8.53	181.01	61.60		0.00	61.60
UI	391.59			391.59			97.90	97.90
KPCL	54.34			54.34	12.26		27.93	40.19
BSES	138.35			138.35	96.00		88.96	184.96
Kayamkulam	1094.40			1094.40	101.46		725.59	827.05
<b>PGCIL</b>								
Eastern Region				0.00	0.00		0.00	0.00
Southern Region				0.00	150.26	13.29	0.00	163.55
Kayamkulam				0.00	32.30		0.00	32.30
Sub total power purchase	9104.80				1050.17	74.34	1550.13	2674.65
<b>Total</b>	<b>16940.13</b>	<b>43.66</b>	<b>334.18</b>	<b>16560.55</b>	<b>1050.17</b>	<b>74.34</b>	<b>1757.15</b>	<b>2881.67</b>

Based on the availability of energy from different sources, the Board expects a surplus of 294.63 MU which can be sold outside. Summary of total energy availability is as follows:

#### **Estimation of total energy availability**

Sl no.	Internal Generation	Million Units
(I)	Hydel generation	7415.53
(ii)	KSEB thermal generation	416.80
(iii)	Wind	3.00
<b>(iv)</b>	<b>Total Internal Generation</b>	<b>7835.33</b>
	Less Auxiliary consumption	45.41
(v)	Power purchase from CGS	7817.72
(vi)	Power purchase from IPPs	1287.09
(vii)	Total Energy Availability	16894.73
(viii)	Energy requirement (within the state)	16600.09
(ix)	Surplus	294.63

The monthly pattern of sale of surplus energy and the rate proposed by the Board is as given below:

### Month wise surplus energy

	Surplus energy	Expected sale rate	Amount
Month	(MU)	(Rs/ kWh)	(Rs.Cr)
Apr-08	99.46	6.00	59.68
May-08	72.25	6.00	43.35
Jun-08	25.04	3.70	9.26
Jul-08	52.78	3.70	19.53
Aug-08	1.47	3.70	0.54
Sep-08	0.00		0.00
Oct-08	15.23	6.00	9.14
Nov-08	0.00		0.00
Dec-08	0.00		0.00
Jan-08	28.40	6.00	17.04
Feb-08	0.00		0.00
Mar-08	0.00		0.00
Total	294.63		158.54

#### 5.2.4 Deliberations in the Advisory Committee:

Shri K.G.M. Nair stated that high cost power should not be allocated to low paying consumers but to high paying consumers. Shri Rawther opined that overall power purchase cost should be reduced. The higher power purchase cost is mainly on account of the fixed cost commitments of RGCCPP and BSES. The Board should initiate negotiations with NTPC for reducing the fixed cost commitment of RGCCPP. In reply to this, representative of NTPC stated that fixed cost cannot be reduced as the same is determined by CERC. The fixed cost commitment has come down considerably over the years from Rs.180 Crore to Rs.110 Crore presently. Further, Government of India has allocated cheap power to be pooled with RGCCPP power and the pooled cost is Rs.4.84/kWh. Hence for consideration of RGCCPP, stand alone cost should not be considered. If the RGCCP is not dispatched, as per the terms agreed with the Ministry of Power, the cheap power allocation would not be extended to KSEB. Shri. Ravindran Nair opined that Board should give importance to NCE projects as provided in the Act.

### **5.2.5. Objections of stakeholders**

The Kerala HT and EHT Industrial Electricity Consumers' Association has argued that, while estimating the average hydro, inflow for the year 2002-03 and 2003-04 should not be considered. According to their estimates the hydel generation should be 8760 MU instead of 7415 MU projected by the Board. Accordingly the internal generation should be 9127.66 MU and the total power requirement would be 16819.4 MU compared to the projection of 16897.71 MU by the Board, which would avoid additional power purchase of 1423 MU thereby avoiding Rs.703.62 Crore. The total power purchase cost estimated by the Association was Rs.1997.18 Crore. Carborandum Universal and Binani Zinc have also provided alternate calculation and stated that additional 1345 MU of generation from hydel sources would be available. FACT, in their objections stated that, all efforts are to be taken to restore the reduction in unallocated power. Further, the trade unions representing various Undertakings also demanded that benefit of excess rain fall is to be shared with the consumers. They also emphasized that KSEB and Government should take all efforts to restore the unallocated share from central pool.

### **5.2.6 Analysis and decision of the Commission**

The cost of generation and power purchase projected by the Board for 2008-09 is Rs.2881.67 Crore as against the revised estimate of Rs.2262.09 Crore for 2007-08, showing an increase of 21.5%. The major reason for the increase is on account of increased generation from RGCCPP due to the pooling of Talcher Power. The Board also included all the diesel stations and IPPs in the dispatch schedule for 2008-09 for meeting the peak load. Even though the Board is planning to dispatch all the plants available, thereby pushing up the power purchase cost by about 22%, the Board still expects a peak shortage during the summer months in 2008-09 as shown in the table below. No proposal is made by the Board to meet the shortage in the ARR.

### Peak shortage projected by KSEB

Month	Peak Shortage/Surplus (MW)	Month	Peak Shortage/Surplus (MW)
Apr-08	59.1	Oct-08	-60.7
May-08	114.7	Nov-08	63.1
Jun-08	-123.2	Dec-08	-17.3
Jul-08	-31.9	Jan-09	55.5
Aug-08	-123.0	Feb-09	-102.0
Sep-08	-68.9	Mar-09	-114.4

While projecting the above deficit, the Board has not included the generation from KPCL and BSES. The Board in its reply to the clarification sought by the Commission on this issue stated that, the dispatch of BSES and KPCL would be only during the periods of necessity and that it is not possible to dispatch these stations during peak hour alone. Hence, there would always be surplus energy, which is to be sold out side.

The matter becomes more serious if the restoration of generation from Panniyar Power House scheduled before the monsoon is delayed, generation of 145.40 MU expected would not be materialized. The Commission sought the details of Panniyar rehabilitation programme, time frame expenditure requirement etc., The Board has provided a report apparently concealing relevant details such as the name of the person/dept who prepared the report, date of the report etc., In the ARR, the Board has stated that all out efforts are made to put back the generator before the monsoon, however, in the report it is mentioned that “it is expected to complete all these works and put back the machine into service within 6 months ie., by the end of August, 2008”.

The Commission is in receipt of the copy a letter from CEA dated 28-1-2008 on the anticipatory power supply position of Kerala for XI Plan and augmentation of generation capacity. CEA addressed the letter to the Commission based on the advice given by the Ministry of Power so as to monitor the power supply position effectively by SERCs. CEA estimates that by the end of 2011-12 there would be

a peak shortage of 150 MW considering the peak demand forecast of 3378 MW in 2011-12. As per KSEB estimates, the peak demand for 2008-09 is about 3087 MW. Thus the shortage would be much higher than what is projected by CEA by 2011-12. **Considering the variations in the forecast, the Commission directs that Board should prepare a status paper giving a detailed plan of action initiated to meet the demand till 2011-12 within two months from date of this Order.**

The Commission had pointed out that the maintenance schedule and hydro capacity availability statement included as Annexure 7(2) of the petition, did not include the dispatch details of IPPs such as BSES or KPCL, which was included as part of ARR. The Board has stated that, RGCCPP would be dispatched continuously, but, scheduling of BSES and KPCL will be limited to peak hours. However, considering the technical constraints, these plants are to be dispatched on a continuous basis, which would result in surplus off peak power. The Board also stated that, considering the exorbitant variable cost of power from these stations, it is difficult to workout a strategy to sell off peak surplus through traders in advance.

It may be noted that, in the ARR for 2007-08 also, the Board had stated that additional generation of 350 MU would be possible from Kuttiyadi Additional Extension, Neriamangalam Extension, Kuttiyadi Tail race, and Kuttiar diversion. Those projects are listed in the present ARR also, which shows that the commitment made in the previous ARR could not be met. It is expected by the Board that Kuttiadi tail race and Neriamangalam extension would be completed by December 2007. However the status of the projects shown in the monthly progress report for the month of December 2007 shows the target date as March 31, 2008, thus there is a mismatch between the ARR and internal progress review documents of the Board.

The Commission has sought details from the Board on the reduction in unallocated power to the State. The Board has forwarded to the Commission,

the copy of letters written by the Hon. Chief Minister and Hon. Minister for Electricity to the Hon. Prime Minister and Hon. Minister for Power, Government of India. The copy of the letters are given as Annexure V(1) to V(6). The main conclusion from the communication is that, Kerala has lost the share mainly on account of comparatively lower power shortages and selling of power to other States. Though sale of power to outside States would increase the revenue to the Board, the Commission feels that every effort should be taken to promote the use of energy efficiently within the State and thereby to increase income and employment in the state.

Almost all the objectors have pointed out that benefit of surplus generation from the hydel sources are to be passed on to the consumers. M/s Carborandum Universal and others have shown the additional potential for hydro generation, which can reduce the purchase of costly power. The Commission finds merit in these arguments. Further, after the heavy summer rain during the month of March, the reservoir statistics shows higher storage than the previous year's level.

The Commission is of the view that, since the dispatch of the RGCCPP power is a reality on account of pooling of cheaper power, the merit order list is to be revised taking into consideration the pooled cost of RGCCP and Talcher. The Commission urges that the Board should strictly follow the merit order dispatch for optimizing the power purchase cost.

In the previous chapter, the Commission has fixed the loss level at 17.92% and the energy requirement at 16156 MU, ie., 110 MU lower than the projection of the Board. Considering the revised merit order stack, the Commission disallows energy from BSES to the extent of 110 MU, ie., as against the proposed dispatch of 138.3MU from BSES, the Commission allows 28.3MU for 2008-09. This would result in reduction of Rs.70.73 Crore in power purchase. Hence the approved power purchase for 2008-09 would be Rs.2603.92 Crore. The Board may take steps to sell the balance power available from BSES and earn comfort charges,



taking into consideration, the commissioning of wind power generation at Ramakalmedu and Agali as approved by the Commission at comparatively cheaper rates, the purpose of power from BSES and other costly stations can be reduced further.

### 5.3 Interest and financing charges:

The Board has estimated the interest and financing charges for the year 2008-09 as Rs.357.31 Crore. There was substantial reduction in interest liabilities over the years. In the filing the Board has stated that for 2006-07, though revised borrowing target was given as Rs.536.49 Crore, only Rs.41.09 Crore was actually borrowed. Further the opening balance as on 1-4-2006 was revised as Rs.3716.62 Crore, and actual redemption was Rs.1256.19 Crore against revised estimate of Rs.747.56 Crore. Hence the closing balance as on 31-3-2007 was Rs.2498.52 Crore as against the estimate of Rs.3416.44 Crore. The total interest liability was also reduced to Rs.429.34 Crore against the approved figure of Rs.513.64 Crore.

#### Sources & Uses (2008-09)

Sl. No.	Particulars	Amount (Rs. Crore)
1	Net Deficit from earnings	(-) 537.27
2	Add Depreciation	459.30
3	Add Contributions & Grants	230.75
4	Add Receipts from Debt & Deposit	909.24
5	Internal resources (1+2+3+4)	1062.02
6	Less Repayment of Loans	503.27
7	Less Funds for capital work	1146.09
8	<b>Fresh Borrowing required (5-6-7)</b>	<b>587.34</b>

For the year 2007-08, Board has revised the estimates of capital expenditure to Rs.956.17 Crore and limited the borrowing to Rs.353.63 Crore from Rs.584.59 Crore. The redemption of loans would be to the tune of Rs.640.68 Crore. Hence the closing balance of outstanding liabilities for 2007-08 would be Rs.2211.47 Crore against the projected figure of Rs.3464.33 Crore in the ARR. Board has

stated that it would be difficult to exercise further swapping due to hardening of interest rates. For the year 2008-09, the Board proposes a capital expenditure of Rs.1146.09 Crore and repayment of Rs.503.27 Crore, which requires additional borrowing of Rs.587.34 Crore. The interest commitments would be Rs.227.63 Crore, out of which Rs.61.49 Crore would be the interest for additional borrowing of Rs.587.34 Crore.

### Interest Charges on Loans & Bonds for 2008-09

Sl. No.	Particulars	Rate of Interest (%)	Balance at the beginning of the year	Planned borrowing during the year	Planned redemption during the year	Balance outstanding at the end of the year	Interest for the year
			(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)
I	Loans from Government	11.50- 17.50	0.00	0.00	0.00	0.00	0.00
II	<b>Loans from others secured</b>						
	KSE Bond	11.50 - 13.00	62.70	0.00	20.90	41.80	6.63
	Non SLR Bonds	11.00	1.40	0.00	0.00	1.40	0.15
	REC	7.00 -11.75	415.02	0.00	94.67	320.35	39.72
	REC OECF	16.00	5.48	0.00	2.74	2.74	0.87
	LIC	11.00	22.00	0.00	2.00	20.00	2.42
	PFC	6.00 - 9.00	69.81	0.00	14.87	54.94	5.78
	Loan from CBI	7.00	60.00	0.00	60.00	0.00	2.27
	EDCK	7.01	5.52	0.00	5.52	0.00	0.17
	EDCP	6.80	37.30	0.00	16.34	20.96	2.84
	<b>Subtotal</b>		<b>679.23</b>	<b>0.00</b>	<b>217.04</b>	<b>462.19</b>	<b>60.85</b>
III	<b>Loans from others unsecured</b>						
	IDBI	9.50 - 13.50	15.37	0.00	11.70	3.67	2.89
	SIDBI	12.57-13.50	0.33	0.00	0.33	0.00	0.61
	LIC	11.00	77.95	0.00	15.62	62.33	7.78
	REC	7.00-11.75	152.48	0.00	11.70	140.78	12.84
	PFC-STL	7.50	0.00	0.00	0.00	0.00	0.00
	Can Fin Homes	8.00	0.00	0.00	0.00	0.00	0.00
	Credit Lyonnais	5.95	43.48	0.00	21.54	21.94	2.28
	KDPP	6.90	0.00	0.00	0.00	0.00	0.00
	KPFC	6.25-12.25	841.50	0.00	205.34	636.16	75.82
	SBT	6.50	0.00	0.00	0.00	0.00	0.00
	STL from UBI	7.50-8.00	47.50	0.00	20.00	27.50	3.07
	STL from Syndicate Bank	6.50	0.00	0.00	0.00	0.00	0.00
	<b>Subtotal</b>		<b>1178.61</b>	<b>0.00</b>	<b>286.23</b>	<b>892.38</b>	<b>105.29</b>
	Additional borrowing 08-09	9.50	353.63	587.34	0.00	940.97	61.49
	<b>Grand Total</b>		<b>2211.47</b>	<b>587.34</b>	<b>503.27</b>	<b>2295.54</b>	<b>227.63</b>

### **5.3.1. Other interest charges**

The interest on security deposit is proposed as Rs.42.50 Crore based on the outstanding consumer deposit of Rs.708.27 Crore as on 1-4-2008.

### **5.3.2. Interest on working capital**

Board has stated that, the working capital needs are met from the overdraft facility from SBI, Canara Bank and Dhanalekshmi Bank. The rate of interest varies from Rs.9.6% to 12%. However, Board did not avail any new short term loan and the interest on working capital is limited to Rs.5.00 Crore in 2007-08 and Rs.5.31 Crore is projected for 2008-09.

The rebate for advance payment for 2006-07 was Rs.11.07 Crore, of which Rs.9.80 Crore was paid to NVVN. The estimated amount for the year 2008-09 is Rs.4.25 Crore. The outstanding balance on PF for the year 2006-07 was Rs.431.71 Crore. For 2007-08 and 2008-09, this would increase substantially since the arrears on salary and DA revision are credited to this account. Hence it is estimated that the interest liability on this account would be Rs.60.70 Crore. The Board has retained a provision of Rs.1.00 Crore for 2008-09 for cost of raising finance at the same level as that of 2007-08.

The Board is paying 0.75% as guarantee commission to the Government for loans guaranteed by the Government. The outstanding balance of the secured loans as on 31-3-2008 would be Rs.679.23 Crore, which would be reduced to Rs.462.19 Crore with the expected repayment of Rs.217.04 Crore. The guarantee Commission would be Rs.5.09 Crore for 2008-09, in addition to Rs.2.70 Crore payable to KPFC for arranging loan. Under other charges and bank charges Rs.8.12 Crore was provided for 2008-09. Thus total other interest and financing charges worked out to be Rs.87.18 Core for 2008-09 as shown below.

### Summary of Interest and Finance Charges proposed

Particulars	2006-07	2007-08		2008-09
	Accounts	ARR	Revised Estimate	Estimate
	Rs Crore	Rs Crore	Rs Crore	Rs Crore
I - Interest on outstanding Loans & Bonds	318.49	356.28	254.23	227.63
II - Interest on Security Deposit	32.73	37.44	37.44	42.50
III - Other Interest and Finance Charges				
Interest on borrowings for working capital	3.10	5.41	5.00	5.31
Rebate to consumers for timely payment	11.07	0.78	10.10	4.25
Interest on PF	32.77	42.11	41.45	60.70
Other Interest	0.00	0.01	0.01	0.01
Cost of raising finance:	0.19	1.00	1.00	1.00
Guarantee Commission		9.30	11.87	7.79
Bank Charges	26.28	6.28	7.61	8.12
Total of (III)	78.12	64.89	77.04	87.18
<b>Grand Total (I+II+III)</b>	<b>429.34</b>	<b>458.61</b>	<b>368.71</b>	<b>357.31</b>

#### 5.3.3. Deliberations in the State Advisory Committee:

Most of the Committee members appreciated the efforts of the Board in reducing the interest charges. However, Shri. Ravindran Nair opined that though reduction in interest cost would reduce the overall ARR, it was not a good sign, since it reflects a reduction in capital investment. Shri Rawther stated that Board had about Rs.1011 Crore as fixed deposits, which could be used for repayments, hence additional borrowings were not necessary.

#### 5.3.4. Objections from stakeholders

No objector commented on the interest and financing charges proposed by the Board.

#### 5.3.5. Analysis and decision of the Commission

Board has claimed that the interest charges have been reduced substantially over the years from Rs.726.32 Crore to Rs.357.31 Crore in 2008-09. However, it may be noted that the reduction during 2006-07 was on account of netting off of loans from the Government, which was about Rs.436.78 Crore. The Board had stated in the ARR that, for 2007-08, borrowing was limited to Rs.353.63 Crore

against Rs.584.59 Crore proposed in the ARR. It may be seen that the reduction in the requirement is on account of reduced capital expenditure (Rs.956.17 Crore as against the proposed Rs.1026.86 Crore) and changes in internal resources. The performance as on January 2008 shows that against a target capital expenditure of Rs.1022.38 Crore, the achievement is only Rs.41.41%. Further, as against the target of borrowing of Rs.534.59 Crore, the actual borrowing was nil. It may be noted that the figures given in the performance report and those shown in the revised ARR do not match. At any count, the cash flow statement shown in the ARR reveals substantial increase in cash and bank deposits much more than what is optimally required. In 2008-09, the closing balance of cash and bank balance is reported as Rs.1490 Crore, which is higher by Rs.350 Crore compared to previous year (2007-08). It is surprising to note that the requirement of additional borrowing have been shown against such a huge cash balance. The cash flow statement is also prepared taking into consideration the proposed impact of the netting off of the government loans and the write off payable by the Government. Thus, the Commission is not in a position to accept the same in the present state.

Board has proposed interest charges of Rs.61.49 Crore for additional borrowing of Rs.353.63 Crore for 2007-08 and Rs.587.34 Crore for 2008-09. However, the performance report for the month of January, 08 shows that the achievement of capital expenditure against the target is only 41.4%, and no borrowing was made till January, 2008. Considering the progress made by the Board in the previous years on this account, it is reasonably sure that the requirement of borrowing would be much less. Hence, the Commission feels that proportional allocation be provided for the balance two months for borrowings during 2007-08. The interest commitment for the same would be Rs.5.60 Crore for 2008-09. Board has proposed capital expenditure for 2008-09 as Rs.1146.09Crore and the same is allowed by the Commission. The Commission notes that the proposed capital expenditure can be met from internal resources. The Commission is of the view that by considering the huge cash balance available with the Board additional borrowing suggested is not justified at any count. Hence, the Commission

reasonably estimates that only 50% of the borrowing proposed would be required for the capital expenditure proposed for 2008-09. Hence, Rs.19.55 Crore is allowed towards interest commitments for the proposed new loans as against Rs.61.49 Crore proposed by the Board.

As mentioned earlier, the Board has included the netting off of government loans while estimating the interest and financing charges. Thus, no provision was proposed towards interest on Government loans. However, the Commission based on the reasons mentioned elsewhere, is not in a position to endorse the proposal of netting off in the present situation. Hence, the Commission allows the interest towards Government loans at the rate of 11.5% for the outstanding amount of Rs.436.78 Crore as on 1-4-2007 in the ARR for 2008-09.

Based on the reasons cited in the previous paras, the interest charges for 2008-09 is allowed on a provisional basis without going into the merits, since the ambiguity in the netting off proposal still persists. Therefore, the Commission, provisionally allows interest and financing charges for the year 2008-09 as Rs. 365.6 Crore as against Rs.357.31 Crore proposed by the Board. Details are shown below.

Particulars	Proposed by the Board (Rs. Crore)	Allowed by the Commission (Rs. Crore)
Interest for existing loans	166.14	166.14
Interest for additional borrowing (2007-08 & 2008-09)	61.49	19.55
Interest on Government loans	0.00	50.23
Interest on security deposits	42.50	42.50
Others Interest & financing charges	87.18	87.18
Total	357.31	365.60

The Board has proposed Rs. 42.50 Crore as interest towards security deposits. The Commission has allowed the provision in the previous year as proposed by the Board. Even though, proposed provisions are approved, the Commission receives number of complaints from the consumers that, the interest on security

deposit is not being paid promptly. The Commission directs that the Board shall follow strictly the procedures in the Supply Code in this regard.

#### 5.4. Depreciation

The Board has estimated the depreciation for 2008-09 as Rs.459.30 Crore based on the norms given in the Annual Account Rules as follows:

##### Depreciation proposed by the Board

Details of Assets	2006-07 (Provisional) Rs. Crore	2007-08 (Revised) Rs. Crore		2008-09 Rs. Crore	
	Accumulated Depreciation at the end of the year	Depreciation for the year	Accumulated Depreciation at the end of the year	Depreciation for the year	Accumulated Depreciation at the end of the year
Land & Rights	0.00	0.00	0.00	0.00	0.00
Buildings	126.65	16.46	143.11	18.31	161.42
Hydraulic Works	188.06	21.14	209.20	21.69	230.89
Other Civil Works	35.22	7.63	42.85	9.10	51.95
Plant & Machinery	1265.75	180.30	1446.05	192.37	1638.42
Cable Network etc	1426.09	189.44	1615.53	213.41	1830.94
Vehicles	10.39	0.11	10.50	0.11	10.61
Furniture and Fixtures	8.82	0.66	9.48	0.76	10.24
Office Equipments	9.29	3.27	12.56	3.55	16.11
<b>Total</b>	<b>3070.27</b>	<b>419.01</b>	<b>3489.28</b>	<b>459.30</b>	<b>3948.58</b>

The Board has stated that, it is mandatory on its part to keep the accounts as per annual accounting rules in force. The Board has also stated that in the policy directions issued by the Government the same is mentioned.

##### 5.4.1. Deliberations in the State Advisory committee:

Representative of NTPC and Shri Ravindran Nair stated that, the Board has provided depreciation as per 1948 Supply Act. The same is to be reworked based on CERC norms as provided in the Tariff Policy.

##### 5.4.2 Objections of Stakeholders

The Kerala HT and EHT Industrial Electricity Consumers' Association has pointed out that Board has estimated the depreciation as per the Electricity

(Supply) Act, ignoring the provisions under Electricity Act, 2003. They pointed out the provisions under para 5.3(c) of the Tariff Policy notified by Government of India and the decision of Forum of Regulators on depreciation norms for Distribution. Based on this, they re-estimated the depreciation as Rs.305.99 Crore compared with the estimate of Rs.459.30 Crore of the Board. The Association also demanded that the depreciation on assets made out of consumer contribution need not be allowed to the Board as has been done in Andhra Pradesh. Considering the GFA of Rs.1623 Crore towards consumer contribution, depreciation provision to the tune of Rs.55 Crore is to be deducted from Rs.305.99 Crore. Hence the allowable depreciation would be only Rs.250 Crore for 2008-09.

MRF, TCC, HNL, Binani Zinc, FACT, and trade unions representing various employee organizations also demanded that depreciation should be allowed only on the existing principles and not on what is estimated by the Board.

#### **5.4.3. Analysis and decision of the Commission**

The Commission in the previous order has categorically mentioned that depreciation has to be calculated based on the provisions under the Electricity Act, 2003. The State Advisory Committee and stakeholders present in the public hearing have also endorsed this view. The Commission while seeking clarifications on the ARR vide letter dated 8-1-2008, asked the Board to provide the depreciation calculation based on the CERC guidelines. However, Board took a stand that as per Section 172 of the Electricity Act, 2003 Government of India and Government of Kerala have agreed to continue KSEB as a STU and a Licensee under the Act. Further, the Board has to follow the Electricity Supply and Annual Accounts Rules (ESAAR), 1985, which was saved under Section 185(2) of the Act. The Board has also stated that CERC has not provided any rates for distribution. In support of the claim the Board has also invited the attention of the Commission to the judgment of Hon' Appellate Tribunal for Electricity dated 29-9-2006 in DERC Vs BSES and also the Judgment of Hon Supreme Court in Appeal no. 2733 of 2006 in the same matter. Considering



these the Board has requested to admit the depreciation as per Annual Accounting Rules, 1985 till new rules are formulated.

Though the Board has stated that depreciation is to be allowed as per ESAA Rules, 1985, it did not show under which specific provision of ESAA Rules, the Commission should allow the depreciation as demanded by the Board.

The Commission has considered the claims of the Board in this regard carefully. Though the Commission has taken a view on depreciation in the previous order itself, considering the arguments placed by the Board and the Objectors, the Commission has decided to verify the facts on this issue.

The Section 172 of the Electricity Act says:

“172. Notwithstanding anything to the contrary contained in this Act,-

- (a) a State Electricity Board constituted under the repealed laws shall be deemed to be the State Transmission Utility and a licensee under the provisions of this Act for a period of one year from the appointed date or such earlier date as the State Government may notify, and shall perform the duties and functions of the State Transmission Utility and a licensee in accordance with the provisions of this Act and rules and regulations made thereunder:

Provided that the State Government may, by notification, authorise the State Electricity Board to continue to function as the State Transmission Utility or a licensee for such further period beyond the said period of one year as may be mutually decided by the Central Government and the State Government.

With the enactment of the Electricity Act 2003, it is clear from the above provision that the Board shall be deemed to function as State Transmission Utility and a Licensee (not as Board) for a period of one year and the said period is extended till June, 2008 as per the agreement between Government of India and Government of Kerala. Regarding provisions for determination of tariff, proviso to Section 61 amply provides for as follows:

“Provided that the terms and conditions for determination of tariff under the Electricity (Supply) Act, 1948, the Electricity Regulatory Commissions Act, 1998 and the enactments specified in the Schedule as they stood immediately before the appointed date, shall continue to apply for a period of one year or until the terms and conditions for tariff are specified under this section, whichever is earlier.”

Before the Electricity Act, 2003 came into existence State Commissions determined tariff as per section 29 the Electricity Regulatory Commissions Act, 1998. Section 29(2) specifically provides that in the case of the Board for determination of tariff Section 59 of the Electricity (Supply) Act, 1948 shall apply. Hence the provision under Section 59 of the Electricity (Supply) Act, 1948 was applicable only for one year from 10-6-2003, there after provisions of the Electricity Act, 2003 is applicable. Further, para 5.3 (c) of Tariff Policy published by Government of India is as follows:

“The Central Commission may notify the rates of depreciation in respect of generation and transmission assets. The depreciation rates so notified would also be applicable for distribution with appropriate modification as may be evolved by Forum of Regulators. The rates of depreciation so notified would be applicable for purpose of tariffs as well as accounting.”

The Secretariat of the Forum of Regulators vide letter No. 1/2 (6)/2006-Tariff Policy/CERC dated 23-6-2006, communicated that, the depreciation rates as specified by CERC (Terms and Conditions of Tariff) Regulations, 2004 may be treated as the rates of depreciation for the purpose under para 5.3 (C) of tariff policy dated 6-1-2006.

Hence, as per the provisions under the Electricity Act, 2003, the depreciation rates for determination of tariff for all practical purposes would be the rates notified by CERC in relation to Generation, Transmission and Distribution. Even if for the academic purpose the contention of the Board is to be accepted, that ESAAR, 1985 is not repealed, the same shall be applicable for the limited purpose of accounting, which shall not be extended to determination of tariff, which is purely guided by Section 61 and other provisions of the Act, 2003.

The Board brought to the notice of the Commission, the decision of Hon. Supreme Court dated 15-2-2007 on DERC Vs BSES Yamuna. In the said case, Hon. Supreme Court has specifically noted that

“In conclusion, we reiterate that in the present case because of inflation, we have to go by the cost of replacement instead of Historical Cost. However,

*we state that our judgment is confined to the facts of the present case alone and the reasoning given herein above is in the context of the period of 5 years. This judgment should not be construed to apply for all the times. It is confined to the transition period only*. (emphasis extra).

It is made clear in the above decision of the Hon Supreme Court that it is applicable only to the Delhi case where, DERC allowed depreciation based on physical life of asset in contravention to the policy directions issued by the Government of Delhi for a period of 5 years (transition period) on which policy directive of the Government of Delhi was operative and on which bids were invited for privatization. It is a specific case where incentives were provided to the investors so as to earn the predetermined return based on the disincentives built in the tender documents. Further, while allowing the interim relief also the Court has observed that *“it is however made clear that we have not given any interim protection for any period other than the period to which the present appeal relates to”*. Suffice to the reason that matter of depreciation applicable to the instant case only. The Supreme Court has further observed that

*“Before concluding, we may state that the basic object of providing depreciation is to allocate the amount of depreciation of an asset over its useful life and not actual life so as to exhibit a true and fair view of the financial statements of an enterprise. Useful life is a period over which a depreciable asset is expected to be used. Useful life of an asset in a capital intensive industry is generally shorter than its physical life. Useful life is pre-determined by contractual limits or by amount of extraction or consumption dependent on the extent of use and physical deterioration on account of wear and tear which depends on operational factors such as the number of shifts, repair and maintenance policy of the Utility and reduced by obsolescence arising from technological changes, improvement in production methods etc. In the present case, DERC has not considered the difference between the physical life of an asset and the useful life of the asset.*

Hence as per the decision of the Supreme Court the depreciation is to be provided based on useful life, and set aside the DERC order mainly on account that DERC has not considered the difference between physical life of an asset and useful life of the asset. Clause 21 (ii) of CERC (Terms and Conditions of Tariff) Regulations, 2004 defines depreciation as follows:

*“Depreciation*

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

- (i) The value base for the purpose of depreciation shall be the historical cost of the asset;*
- (ii) Depreciation shall be calculated annually, based on straight line method over the useful life of the asset and at the rates prescribed in Appendix II to these regulations”.*

As per the above regulations, depreciation is calculated based on the useful life of the asset, which is perfectly in accordance with the decision of the Supreme Court cited above. In the present case before the Commission also, depreciation is estimated based on the regulation of CERC.

As a final verification, the Commission has perused the orders of other State Commissions such as Bihar State ERC, Chattisgarh State ERC and Himachal Pradesh State ERC where the State Electricity Boards exists as a single entity like KSEB. All these Commissions have allowed the depreciation based only on the CERC guidelines for the generation, transmission and distribution. Considering all these matters, the contention of the Board cannot be accepted on merits.

Before proceeding further, it is pertinent to note that though the Board wanted depreciation under the repealed Electricity (Supply) Act, 1948, it did not demand reasonable return of minimum 3% on the NFA at the beginning of the Financial Year. This fact endorses the objections raised by some of the objectors that, the Board is using the provisions which suit them, wherever possible.

Certain objectors have pointed out that assets created out of consumer contribution need not be considered for depreciation. The Commission is of the view that, depreciation on the same is to be allowed to the Board as the maintenance and replacement of the assets are done by the Board. If the depreciation benefits are to be allowed to the consumers, the responsibility of the replacement of the assets should also be vested with them.

As noted above, the Commission has asked for calculation of depreciation as per the CERC norms, but the Board did not provide the same, hence Commission has no other choice than to estimate the depreciation based on the information available before the Commission. The present estimates are allowed on a provisional basis which will have to be firmed once the actual data is available and truing up exercise is taken up. In order to estimate the depreciation the Commission is using the GFA at the beginning of the year 2008-09 as provided by KSEB. The depreciation provisionally approved for 2008-09 as shown below.

**Approved depreciation for 2008-09**

Details of Assets	Approved Rate of Depreciation	Balance at the beginning of the year	Depreciation
	(%)	(Rs. Crore)	(Rs. Crore)
Land & Rights	0.00%	269.70	0.00
Buildings	2.57%	518.80	13.33
Hydraulic Works	1.80%	878.31	15.81
Other Civil Works	2.57%	300.29	7.72
Plant & Machinery	3.60%	3351.41	120.65
Cable Network etc	3.60%	3598.98	129.56
Vehicles	6.00%	12.28	0.74
Furniture and Fixtures	6.00%	14.55	0.87
Office Equipments	6.00%	33.47	2.01
<b>Total</b>		<b>8977.79</b>	<b>290.69</b>

**5.5. Employee cost:**

The projected employee cost for 2008-09 would be Rs.1136.86 Crore, which is inclusive of the impact of wage revision. The employee cost consists of about 60% for existing employees and balance 40% for pension claims.

### Employee Cost proposed by the Board

Sl. No.	Particulars	2006-07	2007-08		2008-09
		Actual Rs. Crore	Projected Rs. Crore	Estimated Rs. Crore	Proposed Rs. Crore
1	Salaries	297.77	272.22	473.45	497.12
2	Overtime/Holiday Wages	0.15	0.87	0.87	0.90
3	DA	195.31	236.03	94.69	159.08
4	Other Allowances	18.72	24.26	24.26	25.00
5	Bonus	2.69	2.73	2.73	2.75
6	Sub Total of 1 to 5	514.64	536.11	596.00	684.85
7	Medical Expenses Reimbursement	2.53	3.13	3.13	3.20
8	Earned Leave Encashment	24.46	32.92	32.92	36.20
9	Payment under Workmen's Compensation	0.31	0.60	0.60	0.62
10	Leave Salary & Pension	0.09	0.05	0.05	0.07
11	Reimbursement of Stamp Duty	0.00	0.00	0.00	0.00
12	Sub Total 7 to 11	27.39	36.70	36.70	40.09
13	Staff Welfare Expenses	0.00	0.30	0.30	0.32
14	Terminal Benefits	355.95	391.89	401.89	411.60
15	Sub-Total of 13 to 14	356.06	392.19	402.19	411.92
16	Grand Total	898.09	965.00	1034.89	1136.86

The Board has stated that as per the agreement with the employees and also as per the policy of the Government, the increase in DA as announced by the Government is extended to the Board employees. Appropriate provision has already been included in the projections to accommodate the future DA revisions also. The Board further stated that, other allowances, overtime, holiday wages, pay revision, DA revision, leave salary in lieu of surrender of earned leave etc., cannot be denied as it is 'an all India phenomenon'.

As per the Government Order No.G.O.(Ms) No.34/200/PD dated 20-12-2001, Government of Kerala has issued restriction on appointment of new staff, which has resulted in difficulties to undertake new connections, line extension, voltage improvement works to reduce the technical losses, energy audit related works and substation construction/maintenance etc. The Board has also stated that, service to the consumers has also affected due to this. In order to maintain the quality of service as per standards framed and to reduce electrical accidents and for timely maintenance, the Board has decided to fill up vacancies in vital areas.

Consequently, 13 electrical sections have been formed. Additional provision for filling up of vacancies has been made in the estimate for 2008-09. The Board has also stated in the filing that, if the pension liabilities are separated, the employee cost ranges between 9.57% to 12.71% of the total expenses, which is comparable to any other utility. Board stated that in the case of other power utilities, the pension liabilities up to the date of unbundling were transferred to the respective State Governments. Considering the revenue per employee and consumer per employee, the employee cost is not unduly disproportionate to the volume of work.

The Commission has sought details on the terminal benefits which were provided by the Board are as follows.

**Details of terminal benefits**

Particulars	Rs. Crore		
	2006-07	2007-08	2008-09
	Provisional	Revised	Projected
Monthly pension	254.55	338.43	346.78
Commutation	38.52	35.49	36.17
Gratuity	62.88	27.97	28.65
	355.95	401.89	411.60

The Board has also stated that DA is calculated @ 32% of the basic pay. 12% is yet to be adopted by the Board. It is expected that retirement during the year is about 679 persons and in 2009 about 708.

**5.5.1. Deliberations in the Advisory Committee:**

Mr. Ravindran Nair opined that employee cost will increase considerably in future as there are number of vacancies which are not filled up at present.

**5.5.2. Objections of stakeholders:**

Most of the objectors participated in the public hearings have vociferously criticized the higher provision for employee costs. Objectors wanted the Board to

improve efficiency and reduce the employee costs. The Kerala HT and EHT Industrial Electricity Consumers Association has pointed out that, the Board has not taken into consideration the Regulations issued by the Commission in this regard. As per the KSERC (Terms and conditions of retail tariff) regulations, O&M expenses should be allowed based on predetermined indices. They pointed out that the employee expenses of the Board has been increasing at a rate of 9.4% between 2004-05 to 2008-09, which is higher than CERC norm of 4% and higher than index of CPI and WPI. They expressed concern that the Board is not following the direction of the Commission on containing terminal benefits. The Association suggested that, CERC notified indexation rate of 5.18% need only be allowed to the Board. They have given a comparison of employee expenses (bundled basis) for different states to show that employee costs are much higher in KSEB. The objector rejected the contention of KSEB that in unbundled entities, pension liabilities are taken over by the State Governments, by stating the example of AP and Punjab.

State	Employee Cost Rs./kWh
Kerala	0.86
Gujarat	0.25
AP (GTD)	0.31
Karnataka (ESCOM+KPTCL)	0.34
Tamil Nadu	0.40
Maharashtra	0.42
Orissa (Gridco+Discom)	0.46
Punjab	0.57
Madhya Pradesh	0.59

Similar opinions were also expressed by Kerala Chemicals and Proteins Limited, MRF Limited, HNL, Binani Zinc, FACT, Cominco Binani Zinc Employees Union, TTP Limited and different trade unions representing the industrial employees.



### **5.5.3 Analysis and decision of the Commission**

The increase in employee cost is one major area of concern, the Commission as well as the stakeholders continuously raised this issue in all the previous proceedings of the Commission dealing with ARR of the Board. The Commission has reminded the Board on many occasions to provide a constructive action plan for reducing and optimizing the employee cost and pension liabilities. In the public hearing, many employee unions representing various classes of employees in the major industries in Kerala pointed out that the increase in wages should be based on increase in productivity. They also stated that due to globalization, industries are forced to act competitive and the comforts enjoyed by the employees are things of the past. They informed that they have saved themselves from unemployment by increasing productivity of labour. They called for similar action from KSEB to limit the employee cost, than charging all increases to the consumers.

While seeking clarification on the ARR, the Commission has raised the issue of reducing the pension liabilities. It is stated that, the Board has taken steps to constitute a pension fund vide order dated 7-1-2008, and the services of M/s Varma and Varma, tax consultants are being availed for working out the modalities in connection with its formation. The Board is also planning to invest surplus funds wherever available from December 2007 onwards as fixed deposit with nationalized banks in order to create a corpus. The Board also mentioned in the ARR that appropriate provision has been made to accommodate the likely increase in DA in the year 2008-09.

In the public hearing, by quoting the examples of AP and Punjab consumers objected to the contention of the Board that, in unbundled entities, pension liabilities are taken over by the State Governments, In order to verify the statement of the Board the Commission had sought details of such States where pension liabilities were taken over. However, the Board could not provide the details and stated in the reply that details would be provided separately. The Commission finds merits in the arguments of the objectors that employee costs in

Kerala is the highest. An analysis, based on the recent publication of Power Finance Corporation (*Report on the performance of the State Power Utilities for the years 2003-04 to 2005-06, PFC, New Delhi, May, 2007*) on the statistics of SEBs, Gencos, Transco, Discoms in India reveals this picture. Selected SEBs and other discoms were analyzed, which shows that comparatively the cost structure of KSEB is higher, especially relating to employee costs, as shown in the following table which is self evident.

### Cost structure of electric utilities in selected states

States	Status	Generation and Power Purchase (Rs./kWh)	Employee Cost (Rs./kWh)	O&M cost (Rs./kWh)	Interest (Rs./kWh)	Depreciation (Rs./kWh)	Administration & General (Rs./kWh)	Others (Rs./kWh)	Total (Rs./kWh)
Himachal Pradesh	SEB	2.04	0.78	0.03	0.23	0.10	0.05	0.07	3.31
Punjab	SEB	1.89	0.64	0.09	0.37	0.23	0.02	0.02	3.26
Gujarat	DISCOs	3.04	0.14	0.05	0.14	0.09	0.03	0.00	3.48
MP	DISCOs+MPSEB	3.06	0.44	0.04	0.10	0.18	0.08	0.10	3.99
Maharashtra	DISCOs+MSEB	2.83	0.36	0.07	0.11	0.14	0.03	0.10	3.63
AP	DISCOs	2.40	0.15	0.03	0.13	0.13	0.04	0.06	2.95
TN	SEB	2.47	0.38	0.05	0.21	0.26	0.03	0.11	3.52
Kerala	SEB	1.45	0.75	0.09	0.47	0.36	0.10	0.20	3.43
West Bengal	SEB	2.63	0.29	0.06	0.25	0.27	0.05	0.20	3.75
<b>Cost as percentage of total cost</b>									
States	Status	Generation and Power Purchase	Employee Cost	O&M cost	Interest	Depreciation	Administration & General	Others	Total
Himachal Pradesh	SEB	61.8%	23.6%	1.0%	7.0%	3.1%	1.4%	2.1%	100.0%
Punjab	SEB	57.9%	19.5%	2.7%	11.5%	7.0%	0.7%	0.7%	100.0%
Gujarat	DISCOs	87.3%	4.0%	1.4%	4.1%	2.5%	0.8%	0.0%	100.0%
MP	DISCOs+MPSEB	76.9%	11.0%	0.9%	2.5%	4.4%	1.9%	2.4%	100.0%
Maharashtra	DISCOs+MSEB	78.0%	9.9%	2.0%	3.0%	3.7%	0.8%	2.6%	100.0%
AP	DISCOs	81.4%	5.2%	1.1%	4.4%	4.5%	1.4%	1.9%	100.0%
TN	SEB	70.2%	10.9%	1.3%	5.9%	7.5%	0.9%	3.2%	100.0%
Kerala	SEB	42.4%	22.0%	2.5%	13.8%	10.5%	3.0%	5.7%	100.0%
West Bengal	SEB	70.2%	7.7%	1.6%	6.7%	7.2%	1.3%	5.4%	100.0%

Source : computed from PFC (2007)

The Board has projected the employee costs including terminal liabilities as Rs.1136.86 Crore. There has been an increase of about Rs.136.8 Crore over 2006-07 in the revised estimates for 2007-08 and about Rs.102 Crore increase in 2008-09. As stated above, these estimates are comparatively higher, it is becoming more difficult to fund the present escalation of employee costs from tariff income. The Board has to take strict commitment to reduce the employee costs. The benefit of computerization and technology improvements adopted by the Board should reflect as reduction in employee expenses. The Commission in its previous orders have suggested to explore options, ultimately, the management of KSEB and the Government have to take positive steps towards funding options for pension liabilities. KSEB has finally taken steps to explore the option of creation of a Pension Fund. With these observations, the Commission approves the projections of KSEB subject to the condition that during the truing up exercise only actual expenses would be allowed. The Board would be allowed to retain any reduction in employee cost achieved during 2008-09 if only it is proved that it was through productivity improvement.

#### **5.6. A&G Expenses**

Administration and General expenses projected by the Board for 2008-09 is Rs.140.06 Crore of which significant portion is Electricity Duty payable to the Government. Regarding duty, as per the observation of C& AG, the Board is now calculating the duty payable under section 3(1) of the Kerala Electricity Duty Act, 1963, for the imported power also. The Board has taken up with the Government to modify/ make amendments to the Kerala Electricity Duty Act 1963 to pass the Section 3(1) duty to consumers. The duty payable for 2008-09 is estimated as Rs.76.45 Crore. The Board expects that the provision for telephone and internet charges, and computer stationery would increase. Further, higher provision is also given for training of employees.

### A&G Expenses proposed for 2008-09

Sl. No.	Particulars	2006-07	2007-08	2008-09
		Provisional	Revised	Estimate
		Rs. Crore	Rs. Crore	Rs. Crore
1	Rents, rates and taxes	3.66	3.86	4.05
2	Insurance	0.86	1.06	1.10
3	Telephone/telex charges, etc.	3.41	3.88	3.97
4	Internet and related charges	0.01	0.08	0.06
5	Legal charges	17.94	9.08	9.18
6	Audit fees	1.85	1.82	1.95
7	Consultancy charges	0.09	0.15	0.18
8	Other Professional charges	0.32	0.34	0.38
9	Conveyance and vehicle hire charges	11.57	12.10	14.31
10	Sub Total (Total of 1 to 9)	39.71	<b>32.37</b>	<b>35.18</b>
11	OTHER EXPENSES			
	a) Fees and subscriptions	0.24	0.24	0.26
	d) Printing & stationary	3.68	3.86	3.94
	e) Advertisements	0.58	0.65	0.68
	f) Contributions/donations	1.00	1.50	1.5
	g) Electricity charges	3.27	3.35	3.4
	h) Water charges	0.10	0.13	0.15
	i) Entertainment	0.13	0.25	0.28
	j) Training expenses	0.34	0.59	1.51
	j) Miscellaneous expenses	4.79	4.91	6.53
12	Total of Other Expenses	14.13	15.48	18.25
13	Freight	6.61	6.75	7.10
14	Other purchase related expenses	2.87	2.92	3.08
	Total	63.32	57.48	61.99
15	Ele. Duty u/s 3(l), KED Act	71.78	70.60	76.45
	<b>GRAND TOTAL</b>	<b>135.10</b>	<b>128.12</b>	<b>140.06</b>

In the petition, the Board has stated that, during the past, primary attention was given for containing the huge revenue deficit, by resorting to economy measures eliminating the wasteful expenses. As the issue was contained, the Board is planning to pay due attention to the administrative requirements which have been postponed. The Board has stated that the increase is limited to 8%.

#### 5.6.1 Objections of stakeholders:

The Kerala HT and EHT Industrial Electricity Consumers' Association has stated that the Board should not include Section 3 duty in A&G expenses as it has been disallowed by the Commission by quoting the Kerala Electricity Duty Act, 1963. They also stated that a provision of Rs.1.5 Crore has been allowed for donations and contributions, where as a provision of Rs.6.5 Crore has been shown as

miscellaneous expenses for which no details are provided. Similar opinion was expressed by HNL and MRF also.

### 5.6.2. Analysis and Decision of the Commission

As stated by the Board the major component of A&G expenses comprises of the electricity duty. The A&G expense is one of the controllable items of cost. The revised estimates of A&G expenses excluding duty, for 2007-08 shows a reduction of about Rs.6.00 Crore compared to 2006-07. For 2008-09, the Board has projected Rs.61.99 Crore which is about 7.8% higher than revised estimates of 2007-08, which is slightly more than the current rate of inflation. As explained in previous orders, the Commission is not in a position to allow Section 3(1) Duty considering the express provision in the Kerala Electricity Duty Act 1963. Hence the Commission disallows the duty portion and allows Rs.61.99 Crore towards A&G expenses for 2008-09.

### 5.7. Repair and maintenance Expenses:

For 2006-07 the approved R&M expenses was Rs.90 Crore where as the actual expenses was Rs.110.99 Crore. In 2007-08, Board has revised the estimate of R&M expenses to Rs.119.15 Crore. The projected expenses for 2008-09 is Rs.131.05 Crore. Of this, Rs.61.02 Crore was for consumption of stores, fuel etc., and the balance is for other expenses. The Board has stated that, while projecting the expenses under hydraulic works, plant and machinery, and other civil works, accident in Panniyar has been taken into consideration.

#### Repair and Maintenance Expenses proposed for 2008-09

Sl.No.	Particulars	2006-07	2007-08		2008-09 (Projection)		
		Prov.	ARR	Revised	Consumption of stores etc.	Other Expenses	Total
		(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)
1	Plant & Machinery	26.55	27.38	27.87	14.06	15.86	29.92
2	Buildings	3.15	1.85	3.6	2.05	2.3	4.35
3	Other Civil works	4.55	4.21	4.85	2.5	3.47	5.97
4	Hydraulic works	1.06	0.92	1.15	1.39	1.78	3.17
5	Lines, Cable networks	70.6	62.34	76.4	38.25	43.8	82.05
6	Vehicles	4.69	4.41	4.86	2.57	2.6	5.17
7	Furniture & fixtures	0.06	0.04	0.07	0.03	0.04	0.07
8	Office equipment	0.33	0.32	0.35	0.17	0.18	0.35
	Total	110.99	101.47	119.15	61.02	70.03	131.05

The projected expense is 10% above the revised estimate for 2007-08 and it works out to 1.5% of GFA. As most of the transmission, generation and distribution assets owned by the Board ranges between 25 to 50 years, the Board has requested to approve the projected R&M expenses.

### **R&M Expenses as percentage of GFA**

Details of Assets	2006-07			2007-08			2008-09		
	GFA at the beginning of the year (Rs. Cr)	R&M (Rs. Cr) (Actual)	%	GFA at the beginning of the year (Rs. Cr)	R&M (Rs. Cr)	%	GFA at the beginning of the year (Rs. Cr)	R&M (Rs. Cr) (estimate)	%
Buildings	439.98	3.15	0.72	466.61	3.60	0.77	481.97	4.35	0.90
Hydraulic Works	837.30	1.06	0.13	856.46	1.15	0.13	854.89	1.26	0.37
Other Civil Works	227.66	4.55	2.00	252.23	4.85	1.92	266.32	5.27	2.24
Plant and Machinery	2984.47	26.55	0.89	3138.48	27.87	0.89	3155.80	29.52	0.95
Lines, Cable Network etc.	2931.72	70.60	2.41	3193.90	76.40	2.39	3271.11	81.75	2.50
Vehicles	11.82	4.69	39.68	11.89	4.86	40.87	12.15	5.11	42.55
Furniture and Fixtures	12.16	0.06	0.49	12.68	0.07	0.55	13.66	0.07	0.51
Office Equipments	17.40	0.33	1.90	30.83	0.35	1.14	19.54	0.35	1.79
<b>Total</b>	<b>7462.52</b>	<b>110.99</b>	<b>1.49</b>	<b>7963.09</b>	<b>119.15</b>	<b>1.49</b>	<b>8708.09</b>	<b>127.68</b>	<b>1.50</b>

#### **5.7.1. Deliberations in the Advisory Committee**

Shri K.G.M. Nair stated that the performance of the Board has to be improved regarding Repair and maintenance. At present the Board is not properly doing preventive maintenance in the distribution system which results in increased losses. The Board should not neglect the R&M area and enough provision is to be allowed for R&M. Shri Rawther stated that no reduction is to be done in the R&M expenses as the provision is required for proper maintenance. He also opined that R&M expenses should be more than A&G expenses. Representative of NTPC stated that the Board has to take up distribution system modernization and proper studies are to be conducted to assess the R&M expenses.

#### **5.7.2. Analysis and decision of the Commission**

The Commission on several occasions directed the Board to make a R&M plan so as to effectively track the expenses. However, the Board could not provide the same. The repeated accidents in the Board's system amply point out the need

for a comprehensive analysis and planning of R&M requirements in the system. As stated by the Board, the overall R&M expenses are about 1.5% of the GFA. The Commission approves the same on the condition that in the next filing the Board has to provide a detailed R&M plan to the Commission.

### 5.8. Other Expenses

The other expenses include prior period expenses and other debits. The Board has stated that, as per commercial accounting principles the Board has to take into account both the income as well as the expenses relating to the prior periods. Income relating to prior period includes, receipts from consumers relating to prior period, interest and other income relating to prior period etc. The expenses relating to prior period may include expenses towards power purchase on the basis of CERC orders, fuel related expenses, operating expense, employee cost, depreciation on account of belated capitalization of assets, interest and finance charges, other charges of past liabilities etc. The actual net prior period charges during 2006-07 as per the accounts were Rs.15.19 Crore. The revised estimate for 2007-08 is Rs.72.88 Crore. For the year 2008-09, the Board has stated that, in addition to the normal charges required to be provided towards prior period income and expenses, special consideration has to be given to account for the arrears of DA payable to the employees in 2008-09. The net amount proposed for 2008-09 is Rs.41.26 Crore. This has been done on the basis of likely settlement of past claims and other contingencies that will get firmed up and other adjustments to be made to settle the audit objections etc.

#### Prior Period Expenses proposed by the Board

Particulars	2006-07	2007-08		2008-09
	Actual	ARR	Revised	Estimate
	Rs. Cr	Rs. Cr	Rs. Cr	Rs. Cr
<b>I Income relating to previous Year</b>				
1. Receipt from consumers	16.43	140.54	18.54	24.45
2. Excess provision for Depreciation in prior period	0	1.85	0	0
3. Excess interest & Finance charges	4.83	18.5	6.15	3.00
4. Other excess provision	22.53	0.89	25.15	35.00
5. Other income relating to prior period	51.78	56.52	58.5	55.00
Total	95.57	218.3	108.34	117.45

Particulars	2006-07	2007-08		2008-09
	Actual	ARR	Revised	Estimate
	Rs. Cr	Rs. Cr	Rs. Cr	Rs. Cr
<b>II Expenditure relating to previous years</b>				
1. Short provision for purchase	76.64	83.26	87.75	94.18
2. Fuel related expenses relating to prior period	0	0.93	0.93	1.17
3. Operating expenses relating to prior period	0.95	16.65	1.87	2.36
4. Employee cost relating to prior period	25.51	83.58	83.58	50.00
5. Depreciation under provided in prior period	0	18.5	0	0
6. Interest & Finance charges	0.91	44.09	0.94	1.00
7. Other charges relating to previous years	6.65	58.29	8.15	10.00
Total	110.76	305.3	181.22	158.71
<b>Net prior period credit/charges(I-II)</b>	<b>-15.19</b>	<b>-87.00</b>	<b>-72.88</b>	<b>-41.26</b>

### 5.8.1. Other debits:

Other debits include expenses relating to research and development, bad and doubtful debts and miscellaneous losses and write offs. The Board has proposed expenses under this head as follows:

Sl. No.	Particulars	Previous Year (2006-07)	Current Year (2007-08)	Ensuing year (2008-09)
		Rs. Cr	Rs. Cr	Rs. Cr
1	Research and Development Expenses	0.13	0.15	0.17
2	Provision for Bad and Doubtful debts	281.32	47.14	51.86
3	Miscellaneous Losses and write-offs	402.01	402	402
	Total	683.46	449.29	454.03

For the year 2006-07, the Board had provided a higher provision for bad and doubtful debts on the basis of the comments of Accountant General. In 2007-08 and 2008-09 Rs. 47.14 Crore and Rs.51.86 Crore was provided respectively. Another major item of expenses included is under miscellaneous losses and write offs. This is on account of suggestion made in the meeting on netting off dues between KSEB and the Government of Kerala held on 25-11-2006. The same has to be approved by the Council of Ministers for implementation. As per the settlement, the net subsidy due to the Board as on 31-3-2006 amounting to Rs.2002.30 Crore has to be written off during the next five years beginning with



the financial year 2006-07, with about Rs.400 Crore every year booked under miscellaneous losses.

### **5.8.2. Deliberations in the State Advisory Committee**

Shri. Ravindran Nair opined that the write off provided by the Board to the tune of Rs.400 Crore every year should be allowed only if it is justified.

### **5.8.3. Objections of Stakeholders**

The Kerala HT and EHT Industrial Electricity Consumers' Association stated that they strongly disagree to the proposal of writing off of Government subsidy owed to the Board to the tune of Rs.2002 Crore. The Association also stated that, the subsidy on account of reduction of tariff to Domestic and Commercial consumers were not paid to the Board, which is the reason why the subsidy amount has increased. The Association argued that, in case the Government is not paying subsidy the burden should be passed on to the subsidized consumers rather than subsidizing consumers. They requested the Commission to discourage the practice of the Board/Government to act against Section 65 of the Act. They also suggested to follow the ATE order on Truing up, which stipulates that truing up exercise should be in two phases with provisional accounts and audited accounts. The Association also pointed out that the Board has cash surplus to the tune of Rs.1490 Crore for 2008-09, which is much higher than the normative working capital requirements, which according to the Association is a clear indication that the Board is earning profits more than stipulated. Regarding prior periods, the Association cited the earlier orders of the Commission and requested to reject the claim.

TTP, State Public sector and autonomous bodies' officers' federation and Titanium General Labour Union requested the Commission not to pass on the inefficiency of the Board to the consumers. The trade unions representing employees and officers in the different industrial units stated that the Board should not write off the amount. Cominco Binani Zinc employees Union stated that the write off of Rs. 400 Crore proposed by the Board is the reason for the

revenue gap, which would result an increase of Rs.0.32/kWh in the tariff. FACT, Cochin Kagaz Limited, Binani Zinc, HNL also objected to the proposal of write off. MRF stated that provision for bad and doubtful debts should not be allowed.

#### **5.8.4. Analysis and decision of the Commission**

The Board has projected about Rs.41.26 Crore as net prior period charges. The Commission in the previous orders have provided token allocation and categorically observed that charges under this head need not be allowed. A perusal of the heads shows that under income, major item are 'other income relating to prior period' , 'other excess provisions' and receipt from consumers', where as major items of prior period charges are short provision for power purchase and employee cost. Though the Board has given estimates under these heads for 2008-09, it can be categorically stated by the very nature of the account head, the projections of income and expenditure under these heads for future years is a difficult task. The Board has not provided any substantiation for projecting various items. Alternatively, expense under this head could be better captured in the truing up exercise. Hence the Commission is inclined to disallow the provision under prior period charges as same could be covered in the truing up exercise.

Regarding other debits, the Board has provided Rs.51.86 Crore as bad and doubtful debts. On previous occasions the Commission had stated that provision for bad debts should be provided when receivables are really become bad. The Board could not provide any such reasoning while projecting Rs.51.86 Crore under this head. It is prudent financial practice to write off irrecoverable receivables. Hence, the Commission provisionally allows the estimate of the Board subject to the condition that Board has to submit the basis of estimation and the policy followed by it.

A major provision for write off of Rs.400 Crore is provided under miscellaneous losses and write offs. Action of the Board to write off such a huge claim even without the approval of Government was commented by almost all stakeholders.

Many of them have stated that, Government's liability to the Board should not be allowed to be passed on to the consumers. Vide letter dated 8-1-2008, the Commission sought details of documents relating to this issue. Board has provided the minutes of the meeting held with Department of Power, Finance Department on the netting off dues between KSEB and the Government held on 25-11-2006. Further, KSEB has furnished the Board Order dated 18-6-2007 and G.O.dated 9-10-2002. These documents are shown as Annexure VI (1) to VI(3) to this Order.

The meeting held on 25-11-2006 was attended by the Principal Secretary (Power), Principal Secretary (Finance) and Chairman, KSEB. In the minutes it is recorded that, *"financial position of the State Government does not permit and the recent good financial performance of the Kerala State Electricity Board does not require large cash outflows from the Government of Kerala to the Kerala State Electricity Board, over and above what is going to be recommended by the SERC. Hence the Kerala State Electricity Board will write off this amount shown as due from the Government of Kerala to Kerala State Electricity Board, over a period of 5 years"*. Para 1(v) of the minutes further states that *"After providing write off of Rs.400 Crore if Kerala State Electricity Board goes into revenue deficit in any of these 5 years, the gap in revenue will be covered by Government by providing subsidy if the same is ordered by the Kerala State Electricity Regulatory Commission subject to verification by the Government of the other calculations of the SERC. Such subsidy will be paid in cash by State Government to Kerala State Electricity Board subject to payment by Kerala State Electricity Board to Government in cash of the electricity duties etc. collected."* In Para 2 of the minutes, it is stated that, the proposal finally require the approval of council of Ministers. In this connection Board in its reply dated 28-3-2008 stated that *"Kind attention of the Hon'ble Commission is invited to the G.O. dated 9-10-2002, wherein Government had ordered to net off the dues between KSEB and Government as on 31-3-2002, without cash transaction by converting that portion of loan as grant. Accordingly various levels of discussions were held between the Board and the Government attended by Principal Secretary*

(Finance), Principal Secretary (Power), Chairman KSEB, it was suggested that the balance amount due to the Board from the State Government as on 31-3-2006 of Rs.2002.3 Crore will be written off by KSEB in 5 years starting from 2006-07 @Rs.400 Crore per year.”

Write off of dues to the tune of Rs.2002 Crore amounts to passing liabilities of the Government to the consumers, which would lead to increase in tariff to the tune of 30 paise/kWh . If this burden is passed on to the consumers in line with reduction in cross subsidy as provided in the Electricity Act, the impact would be substantially high for low paying categories of domestic (lower slabs). As the subsidy receivable amount is shown as the balancing entry in the income statement of the Board, the proposed write off amount would include the excess expenditure which were already disallowed by the Commission in the previous orders. If such pass through is allowed without prudence check, it would lead to back door entry of expenses which are disallowed on the basis being inefficient, and imprudent, in the tariff. In other words, it would amount to mockery of the entire regulatory exercise of approving ARR & ERC. It may also be noted that, no document has been brought to the notice of the Commission, by the Board showing that Government or any other authority has entrusted the signatories in the minutes of the Meeting held on 25-11-2006 to take such a decision. Further, no operative order was issued by endorsing the decision taken in the meeting. The concurrence of the Accountant General is also not obtained before taking such action. Board has made such write off by citing a Board Order dated 18-6-2007. Board has not shown to the Commission whether Board can write off such huge amount of about Rs 2002 Crore by relying the Board Orders. The Commission also perused the Government Order (dated 9-10-2002), in which the Board claims authority to net off dues between KSEB and Government. The operational portion of the Order is as follows:

- “i. Netting of the dues between the KSEB and the Government of Kerala as on 31-03-2002 will be done without cash transaction, by converting that portion of loan to grant which was earlier ordered for conversion into equity, after taking into account the final audited figures in respect of electricity duty

- ii Sub para iii, para 4 of G.O.(MS) No.13/95/PD dated 16-8-95 read as 1st paper above and the G.O.(MS) No. 27/98/PD dated 14-9-98 read as 2<sup>nd</sup> paper above stand amended to the above extent”

Here also no mention is made to write off government dues for the prospective years. Further, it is all the more precarious that the Government has decided to treat the loan portion (which was converted as equity), as grant, which means the Board has no equity at present.

The Commission has sought the impact of the write off on retail tariff vide letter dated 8-1-2008. Board has replied that :

“The Government and KSEB is not for increasing the tariff for compensating the amount written off. It is also specified that if KSEB become revenue deficit in any of the written off period of five years, the revenue deficit shall be covered by the State Government in cash subsidy after verification of the calculation of KSERC by the Government”.

The Commission is of the view that, the stand of the Board in this regard is in violation of the provisions contained in Section 65 of the Electricity Act, 2003 in which provision of subsidy to the licensee is mentioned in the Act. As per Section 65 of the said Act, the Government can pay subsidy in advance on the tariff determined by the Commission. Hence, such provision of cash subsidy to meet the revenue deficit does not arise at all.

It may also be noted that, the Board is booking the subsidy receivable in the Income statement based on Section 63 of the Electricity (Supply) Act, 1948. The Section 63 of the Supply Act read as follows

*“63. Subventions to the Board.- The State Government may with the approval of the State legislature from time to time make subventions to the Board for the purpose of this Act on such terms and conditions as the State Government may determine”*

Hence, as per the provisions of the repealed Act, the provision is that subsidy is to be provided to the Board only with the approval of State Legislature. But the

Board failed to show that such approval has been obtained for the subsidy booked. In such situation, legality of the action of the Board is in question and write off arising out of such action become all the more difficult.

It was also decided in the meeting that, the Board will remit the electricity duty collected from consumers to Government promptly with effect from 1-4-2006. The perusal of accounts shows that the Board has not complied with this decision taken in the meeting.

Over and above all the legal issues, the equity and fairness question is also to be addressed. Fairness principle requires that a consumer to pay for the expenses caused by him in the system. The proposal advanced by the Board requires that, past expenses are to be borne by the future consumers, thus it goes against the principle of fairness. It is not proper to ask a new consumer to pay for the costs which are incurred well before he was connected to the system. Section 61 (d) of the Electricity Act provides for safeguarding consumers interest and at the same time recovery of cost in a reasonable manner. The present proposal is unreasonable in this context.

Thus in the nutshell, based on details furnished, the Board failed to show anywhere in the minutes or orders that the statutes (Electricity Act, 2003 or Electricity (Supply) Act, 1948 or any other statutes in force or repealed) on which Electricity Board and Government relied on for such write offs. More importantly, the proposal in its legality, is still in the form of a proposal only as the same was not approved by the Government yet. Hence the Commission is not in a position to accept the proposal of netting off of dues which increases the financial burden of the consumers, the same can be considered on merits only when the formal approval process is completed within the boundaries of existing statutes.

Considering all the above, the Commission is in a position to allow only Rs.52.03 Crore under 'Other expenses' which is inclusive of research and development expenses and provision for bad and doubtful debts, thereby disallows the provision Miscellaneous loss and write offs (Rs.402 Crore).

## 5.9. Return on Equity

Board has requested the return on equity to be allowed as per the principle earlier approved by the Commission which is based on 14% on Equity. Thus, the return on equity was calculated based on the 14% equity as Rs.217.42 Crore in line with the CERC norms.

### 5.9.1 Analysis and Decision of the Commission

The Commission allows the Board to recover Rs. 217.42 Crore which is 14% return on the Equity for 2008-09 pending the decision of Government on the ascertainment of actual amount of equity share of Government of Kerala.

## 5.10. Expenses and Interest Capitalized

Board has provided Rs.59.19 Crore towards expenses capitalized and Rs.25.75 Crore towards interest capitalized. The Commission provisionally allows these items in the ARR for 2008-09 as proposed by the Board

## 5.11. Aggregate Revenue Requirements:

The summary of Aggregate Revenue Requirements projected by the Board and approved by the Commission is as follows:

Particulars	2008-09 (Rs. Crore)	
	Projection of the Board	Approved by the Commission
Generation Of Power	207.03	207.03
Purchase of power	2674.65	2603.92
Interest & Finance Charges	357.31	365.60
Depreciation	459.3	290.69
Employee Cost	1136.86	1136.86
Repair & Maintenance	131.05	131.05
Administration & General Expenses	140.06	63.61
Other Expenses	495.29	52.03
<b>Gross Expenditure (A)</b>	<b>5601.55</b>	<b>4850.79</b>
Less : Expenses Capitalised	59.19	-59.19
Less : Interest Capitalised	25.75	-25.75
<b>Net Expenditure (B)</b>	<b>5516.61</b>	<b>4765.85</b>
Return on Equity	217.42	217.42
<b>ARR (D) = (B) + ( C)</b>	<b>5734.03</b>	<b>4983.27</b>

As against the total ARR of Rs. 5734.03 Crore projected by the Board for 2008-09, the Kerala HT and EHT Industrial Electricity Consumers' Association has reworked the ARR based on their reasoning as Rs.3794.14 Crore. The Commission based on the reasoning given earlier has approved Rs.4983.27 Crore to be passed on to the Tariff.



## CHAPTER – 6

### REVENUE FROM TARIFFS AND NON-TARIFFS

#### 6.1. Introduction

As per the Order of the Commission dated 26-11-2007, Bulk Supply Tariff and Retail Supply Tariff for the Board were revised with effect from 1-12-2007. The Board estimated the revenue from tariffs based on the revised tariffs. The Board estimated Rs.4292.59 Crore from the sale of energy within the State and Rs.158.54 Crore on account of sale of surplus power to other states.

**Estimate of Revenue from sale of power**

Category	2007-08		2008-09	
	Revised estimate		Estimate	
	Sale of energy (MU)	Revenue from tariff (Rs Crore)	Sale of energy (MU)	Revenue from tariff (Rs Crore)
Domestic	5675.00	1022.20	6190.00	1202.89
Commercial	1420.00	943.28	1610.00	1068.90
Public Lighting	250.00	47.25	270.00	51.30
Irrigation & Dewatering	225.00	20.36	235.00	21.13
Industrial LT	998.00	396.39	1065.00	420.86
NPG	9.00	0.00	10.00	0.00
HT&EHT	3190.09	1242.58	3371.60	1346.62
Railway Traction	104.00	37.22	115.00	47.17
Bulk Supply	364.00	112.23	394.00	133.72
<b>Total</b>	<b>12235.09</b>	<b>3821.51</b>	<b>13260.60</b>	<b>4292.59</b>
Sale of power to other States	<b>953.90</b>	<b>430.07</b>	<b>294.63</b>	<b>158.54</b>
<b>Grand Total</b>	<b>13188.99</b>	<b>4251.58</b>	<b>13555.23</b>	<b>4451.13</b>

#### 6.2. Non-Tariff Income:

The Board estimated the Non-Tariff income as Rs.528.21 Crore which is inclusive of meter rent/service line rental, wheeling charges recovering miscellaneous charges etc., The details are given below:

### Revenue from Non-Tariffs (Rs. Crore)

Sl No	Particulars	2006-07	2007-08		2008-09
		Provisional	ARR	Revised	
1	Meter Rent/Service Line Rental	132.59	138.60	138.60	145.00
2	Wheeling Charges Recoveries	19.24	7.60	31.76	30.00
3	Miscellaneous Charges (UCM, Service connection fee, Fee for maintenance of Public lighting, Testing fee, Reconnection fee, Penalty charges, Minimum Guarantee charges, Charges for Service connection minimum, Meter Box charges, Power allocation charges etc.	124.60	100.66	126.66	130.50
	Total	276.43	246.86	297.02	305.50
4	Grant in aid for Research Projects	0.00	0.00	0.00	0.00
5	Interest on Staff Loans and Advances	1.07	1.46	0.95	0.85
6	Income from Investments	0.66	1.35	0.70	0.75
7	Interest on Advances to suppliers/ Contractors	1.07	1.17	1.17	1.25
8	Interest from Banks	23.53	10.69	86.23	100.35
9	Rebate Received	66.57	56.22	59.73	69.51
10	Income from Trading	10.34	12.00	12.00	15.00
11	Income from staff welfare Activities	0.00	0.00	0.00	0.00
12	Miscellaneous Receipts	26.80	32.09	32.09	35.00
	Total	130.04	114.98	192.87	222.71
	Grand Total	406.47	361.84	489.89	528.21

### 6.3 Deliberations in the Advisory Committee

Shri K.G.M. Nair opined that collection of receivables should be given importance. He also pointed out discrepancies in the data provided by KSEB. The recovery from malpractices in Non-tariff income is given as zero, whereas under the T&D loss section it is reported as Rs.12.73 Crore and Rs.11.04 Crore, which amounts to underestimation of non-tariff income.

### 6.4. Objections of the Stakeholders

The Kerala HT and EHT Industrial Electricity Consumers' Association has stated that in the revenue projections for the domestic category, the nonpaying group

was not included. Further, Board has pointed out that 80% of the sales are to the 0 to 80 Slab category. The Association pointed out that based on their estimation of sales, the revenue from tariffs would be Rs.4472.96 Crore. The revenue gap after considering the non-tariff income would be Rs.986.61 Crore surplus.

## 6.5. Analysis and decision of the Commission

The Commission has sought the details on the sudden increase in the income from interest from the banks. The Board has stated that temporary surplus is deposited in the nationalized banks in order to meet specific capital liabilities. As the decision of creation of pension fund is taken the interest from deposits made to pension fund since 12/2007 accrue only to pension fund, which may not be available to the Board for any other purpose. Though the Board has stated the it has constituted the fund, the Commission is not aware of the constitution of pension fund in the Board as the details are not provided to the Commission. Further, as per the Annual Statement Accounts of the Board furnished by the Board, already staff pension fund under Account Code 57.140 is existing. Hence, such claim of interest to the fund will be allowed on merits, once complete details are furnished to the Commission.

Based on the information furnished by the Board, the Commission approves the revenue from sale and miscellaneous charges as proposed by the Board. The details are as follows:

Particulars	2008-09	2008-09
	Proposed (Rs. Crore)	Approved (Rs. Crore)
1. Revenue from Tariffs		
Within the State	4292.59	4292.59
Revenue from Surplus sale	158.54	158.54
Total Revenue from sale of power	4451.13	4451.13
Non Tariff Income	528.21	528.21
Total Income	4979.34	4979.34

## CHAPTER – 7

### SUMMARY OF ARR & ERC FOR 2008-09.

As detailed in the previous chapters, the Commission approves Aggregate Revenue requirement of Rs.4983.27 Crore as against Rs.5734.03 Crore proposed by the Board. The revenue from sale of power and non tariff income has been approved at Rs.4979.34 Crore as proposed by the Board. The summary of the ARR & ERC for 2008-09 is as follows:.

Particulars	2008-09 (Rs. Crore)	
	Projection of the Board	Approved by the Commission
Generation Of Power	207.03	207.03
Purchase of power	2674.65	2603.92
Interest & Finance Charges	357.31	365.60
Depreciation	459.3	290.69
Employee Cost	1136.86	1136.86
Repair & Maintenance	131.05	131.05
Administration & General Expenses	140.06	63.61
Other Expenses	495.29	52.03
<b>Gross Expenditure (A)</b>	<b>5601.55</b>	<b>4850.79</b>
Less : Expenses Capitalised	59.19	-59.19
Less : Interest Capitalised	25.75	-25.75
<b>Net Expenditure (B)</b>	<b>5516.61</b>	<b>4765.85</b>
Return on Equity	217.42	217.42
<b>ARR (D) = (B) + ( C)</b>	<b>5734.03</b>	<b>4983.27</b>
Less Non-Tariff Income	528.21	528.21
Less : Revenue from Tariff		
(a) With in the State	4292.59	4292.59
(b) Outside the State	158.54	158.54
<b>Total Income</b>	<b>4979.34</b>	<b>4979.34</b>
<b>Revenue Gap</b>	<b>-754.69</b>	<b>-3.93</b>

Based on the approved ARR & ERC the Commission expects a revenue gap to the tune of Rs 3.93 Crore for 2008-09.

### **7.1. Order of the Commission**

The Commission after considering the documents placed before it and having heard the views of stakeholders and Board, hereby approves an Aggregate Revenue Requirement of Rs.4983.27 Crore and total expected revenue receipts of Rs.4979.34 Crore as against Rs.5734.03 Crore and Rs.4979.34 Crore projected by Kerala State Electricity Board in the Petition 34 of 2007 for the year 2008-09, subject to the observations and conditions mentioned in this Order. Hence there would be a revenue gap of Rs.3.93 Crore as against the revenue gap of Rs.754.69 Crore projected by the Board. **The Commission allows to continue the existing tariff of KSEB till next Tariff Order.**

## CHAPTER 8

### DIRECTIVES

The following directives are issued to the Board along with the present order, which are in addition to the directives issued in the previous occasions, for compliance by the Board. **The Board shall submit a report on the status of compliance of all directives issued to it within two months from the date of this Order.**

1. Separation of Transmission and distribution loss: The Board shall provide separate estimates of transmission losses and distribution losses at different voltage levels with the ARR & ERC filing.
2. Separation of technical and commercial loss : The Board in the next ARR & ERC filing shall provide separate figures for technical and commercial losses
- 3 The Board shall prepare a plan for meter replacement and the compliance should be closely monitored
4. The Board shall file a proposal on rationalization of ToD tariffs for the HT-EHT consumers within 2 months from this order.
5. The Board shall file a proposal for incentives linked energy efficiency programme aiming at reducing the peak load in the system within two months from this order.
6. The Board shall prepare an implementation plan including procurement plan for all the important capital projects under generation, transmission and distribution
7. A detailed plan for realisation of the huge amount of arrear electricity charges shall be prepared and submitted to the Commission.
8. A proposal for introducing ToD tariff for LT industrial consumers above 50kVA may be submitted considering the revenue implication and reducing the peak demand.