



KERALA STATE ELECTRICITY REGULATORY COMMISSION

ORDER ON

ARR & ERC FOR 2009-10

Petition No. TP 60/2008 of KSEB

APRIL 17, 2009

KERALA STATE ELECTRICITY REGULATORY COMMISSION
Thiruvananthapuram

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

Petition No. TP-60 of 2008

In the matter of
ARR & ERC of the Kerala State Electricity Board for 2009-10

April 17, 2009

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 2009-10 (TP-60 of 2008) filed by the Kerala State Electricity Board *vide* letter KSEB/TRAC/TF-07/982 dated 29-12-2008, considered the written objections filed by the stakeholders, consulted the State Advisory Committee on 14-1-2009, considered the subsequent written and oral submissions of the KSEB, heard the views of objectors on 12-2-2009 at Thiruvananthapuram, on 16-2-2009 at Kalamassery, and at Palakkad on 18-2-1009 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 (in charge)

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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 2009-10 before the Commission on 29-12-2008. Before filing the petition, the Board vide its letter No. KSEB/TRAC/TF 07/P/834 27-11-2008 had requested extension of time for one month from 1-12-2008 for filing the ARR for 2009-10 stating the reason that owing to the implementation of the recent orders on power restriction, fuel surcharge etc., compilation of data for the preparation of ARR & ERC was delayed. The Commission considered the request of the Board and allowed time till 21-12-2008 and communicated the decision vide letter dated 3-12-2008. The Board again vide letter dated 12-12-2008, requested additional time till 29-12-2008 for filing, which was granted vide letter dated 18-12-2008. In the petition filed on 29-12-2008, the Board has stated that, Tariff petition for bridging the revenue gap was not being filed along with the ARR petition 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 also stated that as per the Government order dated 25-9-2008, detailing the transfer scheme, the functions and undertaking of the Board was vested with the Government and would be re-vested into a company within September 2009. The petition is prepared taking into consideration that the Board is functioning as a single entity, and if a new company is formed under the Companies Act 1957, the petition may be allowed to be revised in line with the rules and regulations applicable to the new company.

The Commission so far has issued six 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 the 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 total revenue of Rs.3196 Crore, resulting in 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 Board submitted the ARR & ERC for the year 2005-06 on November 15, 2004 which 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, with 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 by the Board on November 30, 2005 estimating 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 Board submitted the ARR & ERC for the year 2007-08 on 11-12-2006 projecting a revenue requirement of Rs.4545.02 Crore and a total revenue of Rs.4114.91 Crore from the sale of power and from non-tariff income, with 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 the 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 estimated as an 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.

The ARR & ERC for 2008-09 was filed on 21-12-2007 showing 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. In the Order dated 19-4-2008, the Commission approved an ARR of Rs.4983.27 Crore and ERC of Rs.4979.34 Crore resulting a gap of Rs.3.93 Crore and allowed KSEB to continue the existing tariff till the next tariff order.

1.2 Procedural overview

In the ARR for FY 2009-10 the Board has projected a revenue requirement of Rs.6113.22 Crore and a revenue receipt of Rs. 5013.94 Crore leaving a revenue gap of Rs.1099.28 Crore. The Commission in its meeting held on 31-12-2008 decided to accept the petition as TP60/2008, and communicated the same to KSEB vide letter dated 31-12-2008. The Commission also stipulated a time frame for processing the ARR petition along with the letter of acceptance of the Petition. In the letter, the Commission also issued instruction to the Board to file proposals for bridging the revenue gap at the earliest and to forward draft abstract of the petition for the approval of the Commission for publication. Further, the Commission sought clarifications on the petition vide letter dated 15-1-2009 and directed the Board to furnish the same on or before February 5, 2009 and to publish the summary of the petition by 20-1-2009, inviting comments from the Public. The Board vide letter dated 8-1-2009 forwarded the draft summary of the petition for approval. The Commission approved the summary with necessary modifications, and communicated the approval vide letter dated 12-1-2009.

The summary was published in the following dailies, giving time till 9-2-2009 for the stakeholders to submit objections and suggestions.

- Kerala Kaumudi dated 20-1-2009
- Deshabimani dated 20-1-2009
- The New Indian Express dated 20-1-2009
- The Hindu dated 20-1-2009

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 14-1-2009 to discuss the ARR petition filed by the Board. The minutes of the meeting of the State Advisory Committee is given as Annexure – I.

The Commission vide its letter dated 11-2-2009 forwarded copies of objections filed by the public for obtaining reply of the Board. Again on 24-2-2009, 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 forwarded the reply to the objections vide letter dated 9-3-2009 which is given as Annexure – III

1.3. Public Hearings

Public hearings on the matter was held at three places viz., Commission's Office, Thiruvananthapuram on 12-2-2009, KIED Hall, Kalamassery on 16-2-2009 and Municipality Hall, Palakkad on 18-2-2009. The lists of persons who attended the Public Hearings are given in Annexure IV (a), IV (b) and IV(c).

The Kerala HT and EHT Industrial Electricity Consumers' Association, (henceforth mentioned as 'The Association') argued that the ARR & ERC filing of the Board has to be in line with MYT regulation as specified by the Commission. M/s Binani Zinc also raised similar objections. According to them, the Board is willfully refusing to comply with the regulations that they are legally bound to follow. According to the Association, the stand taken by the Board by not filing the petition on MYT principles is to delay the cross subsidy reduction, and this is against the provisions of the Act. Further, the Association demanded that the petition was to be rejected on the ground that there was no proposal for bridging the revenue gap.

The Association also stated that, Board did not comply with the direction of the Commission for segregation of Accounts. The Association requested that the Commission should not be carried away by the argument of lack of availability of data by the Board. Further, the Association insisted that tariffs are to be determined based on cost of supply and cross subsidy reduction should be effected in a time bound manner. The Association demanded that the Commission should determine two sets of

tariff, one based on full cost recovery and the other based on the subsidy provided by the Government as has been done in the state like Andhra Pradesh.

The Association pointed out that, in the filing, the Board has suggested that the unmet gap was to be bridged by treating the same as regulatory asset, if the gap is not covered by tariff revision or subsidy from the Government. They further pointed out that even after the Order issued by the Commission rejecting the proposal of the Board for netting off of dues and writing of the subsidy payable by the Government, the Board continued to write off of the subsidy, thereby showing its lack of understanding of the legal and regulatory regime under which it is currently bound to operate.

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. The Board in its filing stated that Government of Kerala as per Section 131 of the Electricity Act, 2003 has vide Order No.MS 37/2008/PD dated 25-10-2008, issued orders for vesting all the functions, properties, interests, rights, obligations and liabilities of KSEB which will be re-vested to a new entity within one year i.e., by September 2009. Till such time, the Government is carrying out the functions of erstwhile KSEB through a Managing Committee appointed for the purpose as provided in para 5(1) of the Government Order. Hence, the Commission is maintaining the earlier stand that MYT principles are to be implemented once the restructuring process is complete.

As per para 5(1) of the Government Order dated 25-10-2008, all interests, rights in properties, all rights and liabilities of the Board vested in the State Government shall be administered by the Government in the name as 'Kerala State Electricity Board' by appointing a special officer and a managing committee for this purpose till the date of re-vesting, to be notified by the State Government to re-vest the same in a company as provided in sub-section (2) of section 131 of the Act. Considering this, for the purpose of this order, the Commission refers the 'Government' as 'the Board' or 'KSEB'

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 hearings, the Commission has taken the decision on the ARR & ERC of the Board for 2009-10 as detailed in the following chapters.

CHAPTER – 2

ENERGY SALES PROJECTIONS

2.1. Sales projections

The Board has projected the energy sales for the year 2009-10 based on the past trend. According to the Board, energy sales in the State is showing an increasing trend since 2003-04. However, due to the restrictions imposed in 2008-09 on account of shortage of power, energy sales in the current year would be less than the anticipated figure. In the previous years, the Board has estimated the energy consumption based on the connected load and actual growth rate of consumers. Regional characteristics, seasonal variations, change in consumer habits etc., were also factored into the energy sales projections. The methodology used in the past was realistic and the percentage error was less than 2%. However due to the restrictions imposed in the current year, the methodology used in the previous years was modified and sales was projected based on the actual energy sale of previous four years from 2004-05 to 2008-09. The consumption for the year 2008-09 was re-estimated based on the past trend from 2003-04 to 2007-08, which is considered as unrestricted demand.

The Board also stated in the filing that, due to the shifting of consumers from HT-II to HT-IV from 1-12-2007, the energy sale which was estimated at 155 MU in HT-II category for 2008-09 is re-estimated as 113 MU.

The energy sales for 2009-10 estimated as mentioned above, was grossed up considering the anticipated increase in sales during the year on account of new projects like Vallarpadam container terminal, Smart City, Vizhinjam Port etc., Anticipated demand for Vallarpadam is 7 MVA and 10 MVA for Smart city. Accordingly, the total sales expected for the year 2009-10 is 13966MU, which is the unrestricted demand.

However, the power restrictions are expected to continue till the onset of monsoon. Hence, restrictions would be applicable for the first two months (April and May) of 2009-10. Accordingly the Board expects a reduction of 389.59 MU (about 2.9% of the demand) than the projected level during 2009-10. Since the shortage is expected to be met through the purchase from traders, the consumers can purchase energy over and above the quota at the price determined by the Commission and some sales could be

expected during April and May through this mode. Accordingly, the Board estimated the energy sales for the year 2009-10 as follows:

Energy sale estimation for 2009-10 (Restricted and unrestricted)

Consumer Category	2006-07 (Actual)	2007-08 (Actual)	2008-09 (Revised Estimate- Restricted)	2009-10 (Un restricted)	Energy reduction expected Apr & May-09	2009-10 (Partial Restricted)
	(MU)	(MU)	(MU)	(MU)	(MU)	(MU)
Domestic	5213	5603	5950	6630	53	6577
Commercial	1246	1378	1390	1728	56	1672
Industrial	934	985	956	1128	36	1092
Agriculture	220	231	235	238	0	238
Public Lighting	229	249	275	305	0	305
Total LT	7842	8445	8806	10029	145	9884
HT I Industrial	1436	1461	1227	1492	60	1432
HT II N I and N C	135	138	93	120	5	115
HT III Agriculture	9	9	7	10	0	10
HT IV Commercial	431	507	518	709	23	686
EHT 66/110 kV	1070	1024	900	1068	38	1030
Railways	72	109	115	154	5	149
Bulk supply	335	357	303	384	10	374
Total HT	3489	3605	3163	3937	141	3796
Total	11331	12051	11969	13966	286	13680

As stated above, the Board has estimated the consumption over and above the quota for the months of April and May 2009 as 164.7 MU as follows:

Excess consumption over quota for April & May, 2009

Month	HT & EHT consumers	LT consumers	Excess consumption at sale end	Consumption at Generation end
	(MU)	(MU)	(MU)	(MU)
Apr-09	36.0	45.0	81.0	98.24
May-09	37.2	46.5	83.7	101.52
Total	73.2	91.5	164.7	199.76

2.2 Deliberations in the State Advisory Committee

Members of the State Advisory Committee did not comment on the estimation of sales by KSEB. Shri P.G Gopinathan suggested that by using CFL lamps, about 300 MW of

power could be saved. In general, the Advisory Committee was of the opinion that the projection made by KSEB is reasonable.

2.3 Objections of stakeholders:

The Standing Council of Trade Unions and M/s Binani Zinc limited objected to the energy projections of the Board. According to them, due to the recessionary trends in the economy, energy sale would increase only by 11 to 12%. Southern Railway commented on the energy projections by stating that sale to EHT sector is negative except for the railways. KSEB has not addressed this issue and no plans are made for improving the industrial consumption in the State.

M/s Binani Zinc stated that the Board should adopt more scientific methods for projection of the load. The 13.5% increase in sales projected by the Board considering the deceleration in the economic activity especially in the sectors such as tourism, seafood, construction, tyre industry etc., is unrealistic. According to M/s Binani Zinc, growth would be about 12%, which would result in a reduction of energy requirement of about 250 MU.

2.4 Analysis of the Commission

The energy sales for all categories taken together in 2007-08 was 6.34% higher than previous year. The average annual growth rate from 2003-04 to 2007-08 works out to 7.8%, of which HT/EHT growth was 5.5% and EHT growth was -2%. However, in the Low Tension sector growth was phenomenal at 8.9%. The restrictions imposed in the year 2008-09 coupled with the recessionary trends have made the estimation of energy sales difficult.

The Board has attempted sales projection based on the period from 2004-05 to 2008-09. The energy sales for the year 2008-09 was adjusted to the unrestricted level by taking the average growth between the period from 2003-04 to 2007-08. Hence, in a nutshell the Board has used the compounded annual average rate of growth for the period to estimate the energy sales for the year 2009-10, which was considered as the unrestricted sales. Further adjustments for restrictions for the months of April and May for 2009-10 was made thereby the restricted demand for the year 2009-10 was estimated as 13680 MU. The Board also assumes that, additional sales over and above

the quota for the month of April and May will be to the tune of 164 MU, projecting the total sales at 13844MU.

The Commission analysed the energy projections of the Board in detail and considered the objections raised by the stakeholders. Based on the information available in the filing, the energy sales over the years for different categories are given below.

Energy sales in previous years

(in MU)

	2003-04	2004-05	2005-06	2006-07	2007-08	Restricted 2008-09	Partially Restricted 2009-10
Domestic	4004	4262	4668.4	5213	5603	5950	6577
Commercial	879	948	1092.7	1246	1378	1390	1672
Industrial	751	783	873.9	934	985	956	1092
Agriculture	202	191	189.57	220	231	235	238
Public Lighting	166	183	207.78	229	249	275	305
Total LT	6002	6367	7032	7842	8445	8806	9884
HT I Industrial	1125	1238	1363.2	1436	1461	1227	1432
HT II N I and N C	130	141	130.13	135	138	93	115
HT III Agriculture	9	9	9.54	9	9	7	10
HT IV Commercial	304	339	377.87	431	507	518	686
EHT 66/110 kV	1108	1036	1003.8	1070	1024	900	1030
Railways	46	44	57.94	72	109	115	149
Bulk supply	188	212	296.06	335	357	303	374
Total HT/EHT	2910	3019	3239	3489	3605	3163	3796
Total	8912.0	9386.0	10270.8	11331	12051	11969	13680
Additional sales							164.7
Total sales							13844

Growth rates (Annual as well as compounded)

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	CAGR (2003-04 to 2007-08)	CAGR 2003-04 to 2009-10
Domestic	6.4%	9.5%	11.7%	7.5%	6.2%	10.5%	8.8%	8.8%
Commercial	7.8%	15.3%	14.0%	10.6%	0.8%	20.3%	11.9%	11.3%
Industrial	4.3%	11.6%	6.9%	5.5%	-3.0%	14.2%	7.0%	6.4%
Agriculture	-5.4%	-0.7%	16.2%	4.7%	1.9%	1.3%	3.4%	2.8%
Public Lighting	10.2%	13.5%	10.1%	8.7%	10.6%	10.9%	10.6%	10.7%
Total LT	6.1%	10.4%	11.5%	7.7%	4.3%	12.2%	8.9%	8.7%
HT I Industrial	10.0%	10.1%	5.4%	1.7%	-16.0%	16.7%	6.7%	4.1%
HT II N I and N C	8.5%	-7.7%	3.6%	2.6%	-32.7%	23.7%	1.6%	-2.0%
HT III Agriculture	0.0%	6.0%	-1.9%	-1.4%	-24.2%	38.6%	0.6%	1.3%
HT IV Commercial	11.5%	11.5%	14.1%	17.6%	2.2%	32.4%	13.6%	14.5%
EHT 66/110 kV	-6.5%	-3.1%	6.6%	-4.3%	-12.2%	14.4%	-1.9%	-1.2%
Railways	-4.3%	31.7%	24.5%	51.4%	5.3%	29.6%	24.1%	21.6%
Bulk supply	12.8%	39.7%	13.3%	6.3%	-15.0%	23.4%	17.4%	12.1%
Total HT/EHT	3.7%	7.3%	7.7%	3.3%	-12.3%	20.0%	5.5%	4.5%
Total	5.3%	9.4%	10.3%	6.3%	-0.7%	14.3%	7.8%	7.4%

As shown in the above table, for 2009-10, the energy sales was projected at 7.4% at an average rate and about 14.3% over 2008-09 (restricted). However, the growth rate of sales for the year 2007-08 was only 6.3%. It is amply clear from the above table that the growth was propelled by the LT sector with growth rate close to 8%. The major contributors in the LT sector are Domestic (8.8%), Commercial (11.3%) and public lighting (10.7%). However, for these sectors, annual growth rate over 2008-09 assumed by the Board was Domestic (10.5%), Commercial (20.3%), industrial (14.2%), public lighting (10.6%), which is apparently high and may not be sustainable in the long run especially considering the general recessionary trends. **The growth of public lighting should be viewed with caution mainly on two counts: one; it contributes to the peak load two; the tariff levels are comparatively low** (only Rs.2/kWh as per the projections of the Board).

The major disturbing trend is the stagnation and deceleration in the EHT sector except Railways. As claimed by the Railways, EHT sales growth is positive only for them. Further, the Board has stated that the impact of new projects such as Smart city, Vallarpadam etc., are considered; but however, the impact is not visible in the projections as the projected trend for EHT is negative and HT is close to the previous year's average.

As has been mentioned in the previous Order, the Board has to consider the long term implication of the trends in energy sales, which shows a clear stagnation of base load and increase in peak load due to the increase in domestic, commercial (HT/LT) and public lighting load. **In order to reduce the gap between average load and peak load, concerted effort on the part of the Board is required through incentive/disincentive measures. The Commission expects suitable incentive proposals from the Board in this respect.**

Though the Commission has continuously directed the Board to provide comprehensive database on sales for analyzing the veracity of the projections, the same was not provided nor any attempt was made to create such database. 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, the Commission is inclined to accept the projections of the Board without any modification. Accordingly the total sales projected for 2009-10 is taken as 13680MU with additional sales of 164.7 MU totaling 13844MU. The additional sales as projected by the Board would be considered, without allocating to different consumer categories.

CHAPTER – 3

TRANSMISSION AND DISTRIBUTION LOSS

3.1 Introduction

KSEB in its petition has stated that in between 2001-02 and 2007-08, T&D loss was reduced by 10.75%. During the same period the internal loss was reduced from 30.76% to 20.02%, which is about 1.79% 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	1.50
2007-08	21.63	1.80	20.02	1.45

KSEB estimated that losses in the transmission system are about 5% of the total energy input. The remaining losses are attributed to the distribution system. The strengthening of primary and secondary distribution system include constructing one kilometer of HT line in each month in each section, upgrading 11 KV lines to 33kV, re-conductoring LT lines with high capacity lines, capacitor compensation, introduction of automatic voltage boosters, relocation of transformers to reduce the LT lines, introduction of LT less system in selected areas, introducing energy audit at transformer levels etc. The investment programme proposed and actually achieved by the Board is presented below, which is compiled from their filing.

Physical Targets proposed and Achieved by the Board

Year	2003-04	2004-05	2005-06	2006-07	2007-08 (projection)	2007-08 (Actual)	2008-09 (Projection)	2008-09 (Revised)	2009-10 (Projections)
Substations (Nos)									
220kV	1	1	1	0	3	1	0	2	2
110 kV	6	8	4	2	11	4	11	7	18
66kV	3	2	4	3	1	1	4		5
33kV	7	15	10	10	31	13	26	32	27
Lines (Km)									
220kV	4.3	15	56		30.70	1.01	18.61	18.50	74.00
110 kV	154.6	30	55	30	114.75	56.38	134.80	119.00	202.30
66kV	8.4	5	13	15	36.99	11.13	14.64	15.50	16.00
33kV	95.4	157	131	95	170.50	105.44	309.07	375.70	318.30
11 kV lines	1269	955	1062	1820	2000	1807	3000	3941	5000
LT lines	4429	6074	7441	8229	6000	8128	6000	6500	3800
Distribution Transformers (Nos)	1063	1882	1751	2124	2000	2553	2000	4128	5000

The Board has stated in the filing that a sudden decrease in HT-LT ratio from the present level of 1:6 to 1:1 is not possible due to variety of reasons ranging from the need for huge capital to other constraints such as land acquisition, objections from interested groups etc.,. Further, the Board has targeted to reduce the HT-LT ratio to 1:4 by end of the 11th plan.

The Board also narrated the usual steps being taken for reducing the commercial losses such as replacement of faulty meters, anti-power theft activities, computerization of billing and revenue collection, energy audit, loss monitoring at circle level, installing meters at transformers, feeders and border points, providing load factor and power factor incentives etc., The Board has given the number of faulty meters replaced as follows.

Faulty meter replaced

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	5.80

Performance of the Anti power theft squad and other offices are also given in the filing which are compiled and given below:

Performance of Anti-Power theft squad and Audit Offices

Year	Anti power Theft Squad				Regional Audit Office		Division/Section Squad		
	Inspections	Theft cases Registered	Amount Assessed	Amount Realised	Amount assessed	Amount realized	Number of cases detected	Amount assessed	Amount realized
	(Nos)	(Nos)	(Rs. Cr)	(Rs.Cr)	(Rs. Cr)	(Rs. Cr)	(Nos)	(Rs. Cr)	(Rs. Cr)
2005-06	15611	981	21.69	9.82	14.46	4.35			
2006-07	16221	1895	12.73	11.04	14.02	7.08	18094	6.09	4.66
2007-08	18606	1144	16.93	10.5	24.72	11.94	24281	10.5	6.21
2008-09 (up to Oct-08)	9410	351	15.59	7.57	16.88	9.73	20096	16.85	7.13

In the programmes mentioned for the year 2008-09 and 2009-10, the Board has stated that though in 2008-09, 10.30 lakh faulty meters were planned for replacement, upto September 2008 about 3.11 lakh meters alone could be replaced. In 2009-10, the Board has planned replacement of 8 lakh meters. Further by strengthening the transmission and distribution system, KSEB is aiming to reduce the T&D loss by 1.32% in 2008-09 and 1.27% in 2009-10. Thus the loss target was revised to 18.69% for 2008-09, as against the projected level of 18.48% in the ARR for 2008-09 and loss reduction target was reduced to the committed level of 1.63% to 1.32% in 2008-09. For 2009-10, the internal T&D loss target proposed by the Board is 17.43%.

3.2 Deliberations in the Advisory Committee

Shri.Ravindran Nair mentioned that commercial losses can be reduced through effective metering. He suggested that Board should concentrate on reduction in technical losses. Shri.Viju Chacko, suggested that a separate project is to be taken up to achieve the loss reduction.

3.3 Objections of stakeholders

Southern Railway commented that 14% return is to be allowed only if KSEB achieves the benchmark parameters fixed by the Commission. The Association pointed out that

the Board has failed to achieve the targets fixed by the Commission continuously. The Association based on the previous practice argued that losses are to be allowed at 16.55% only, which means a loss reduction of 1.27% as proposed by KSEB over the approved level in 2008-09. The Association stated that since the restricted sales would be 13679 MU, the energy requirement based on 16.55% loss would be 16412 MU only.

3.4 Analysis and decision of the Commission

The Commission keenly follows the loss reduction achieved by KSEB. The Board has claimed that loss reduction to the tune of 10.75% was achieved in the past, for which due appreciation is to be given to the Board. However, it can be noted that the Board could not achieve the loss targets fixed by the Commission in the past and even the loss targets proposed by the Board themselves fall short in actual terms. National Electricity Policy and Tariff Policy aims at aggressive reduction in losses to protect the interest of the consumers. The Forum of Regulators (FOR) in their deliberations stressed the need for aggressive reduction of AT&C losses. The Sub-Committee of FOR on 'Methods of loss reduction' has suggested that loss reduction of not less than 10% to be set if the current loss level is above 20%, which means at least 2% reduction every year if loss levels are above 20%. Though the Commission in the previous Orders have stipulated loss reduction targets of 3% initially and then 2%, is now inclined to adopt a policy of allowing the reduction proposed by the Board themselves. Accordingly, for the year 2008-09, the loss reduction target was fixed at 1.72%.

The Board in the present filing has proposed a reduction of 1.27% over the estimated loss level of 18.69% for 2008-09, which was higher than the loss target proposed by the Board for 2008-09 (18.48%). The Commission has fixed the target for 2008-09 as 17.92%. The Objectors have stated that loss reduction targets approved was never achieved by the Board. The Commission in its previous orders has specifically directed the Board to provide separation of voltage level losses and for the segregation of technical and commercial losses. So far the Board has not complied with such directions. In their letter dated 26-3-2009, the Board has stated that voltage level loss is yet to be assessed since simultaneous meter reading is essential to assess the loss levels realistically and the same would be furnished as soon as it is complied.

Loss reduction proposed, approved and achievement

Year	Proposed in the ARR (%)	Approved by the Commission (%)	Actual achieved by KSEB (%)
2005-06	2.72	2.72	1.99
2006-07	1.76	2.50	1.50
2007-08	1.83	2.00	1.45
2008-09	1.63	1.63	1.32

The Board has mentioned several steps for reducing losses. However, in many cases only the steps have been mentioned without any plan or method for achieving such reductions. The Commission is of the view that the Board could not make sufficient loss reduction mainly on account of lack of planning, non-adherence to the capital investment programme, and laxity in the replacement of faulty meters.

In the first place, the Board could not even provide an estimate of voltage level losses even after 5 years since regulatory system is in place. The Board has always sheltered themselves under flimsy grounds for not producing such vital information. The target investments proposed by the Board in the transmission and distribution sector have never been achieved. The Board has never made any study or furnished information on the benefits that could be derived from the investment programme, nor the loss reduction that could be achieved through such investment. The Board has always proposed ambitious investment programmes, later the targets were revised downwards, and the actual achievement was much less. This is clear from their filing as given above, on the investment plan for 2007-08 and 2008-09. As per this table, for 2007-08, the Board has proposed three 220 kV substations, eleven 110 kV substations and thirty one 33 kV substations, but the achievement was only one 220kV substation, four 110 kV substations and thirteen 33kV substations. Same is the case with construction of lines, as against the target of 30.70 km of 220 kV lines achievement was only a meagre 1.01km. In many cases achievement was nearly half of the target. The Commission is completely at dark on the benefits of such investments made in the system.

For the year 2008-09, as against the target of drawing 3941km of 11kV lines proposed in the ARR filing, achievement as on 31-12-2009 was 1810 km. In the case of LT lines, achievement was 4633 km against the target of 6500 km and 2433 nos of distribution transformers were placed against the target of 4128 nos.

In the previous two filings the Board has stated that HT:LT ratio would be reduced to a level of 1:4 from the present level of 1:6. However, an independent assessment made on the achievement made so far shows that such target will not be materialised. Going by the data provided by the Board, each year at least 6600km of new HT lines have to be drawn to reach the target by 2011-12. The present target is much less than that and the achievement is about half of the target required.

In reply to the directions issued by the Commission on replacement of faulty meters, the Board in its letter dated 17-12-2008 stated that as on July 2008 there were 6.59 Lakh faulty meters in the system and stated that already steps have taken to purchase 8.17 lakh single phase meters with LCD display and 1.26 lakh 3 phase meters with LCD display and ToD facility. Board has also given the action plan for purchase of meters for replacement of faulty meters as follows:

Delivery schedule of single phase meters					
12/2/2009	12/3/2009	12/4/2009	12/5/2009	12/6/2009	Total
2 lakh	2 lakh	2 lakh	2 lakh	1.75 lakh	8.17 lakh

Delivery schedule of three phase meters								
Dec, 2008	Jan, 2009	Feb, 2009	Mar, 2009	Apr, 2009	May, 2009	June, 2009	July, 2009	Total
(Nos)	(Nos)	(Nos)	(Nos)	(Nos)	(Nos)	(Nos)	(Nos)	(Nos)
21,000	20,000	20,000	20,000	18,750	10,000	10,000	6,250	1,26,000

Meter replacement target

	Single Phase	Three Phase	Total
	(Nos)	(Nos)	(Nos)
Faulty meters as on October, 2008	6,54,747	57,142	7,11,889
Replacement proposed in 3/2009	1,81,201	20,072	2,01,273
Replacement proposed in 4/2009	2,42,687	14,674	2,57,361
Replacement proposed in 5/2009	2,30,853	22,397	2,53,250

However, as part of the validation process, the update of meter replacement was obtained from the Board. The details furnished by the Board vide letter dated 7-2-2009 are furnished below:

Progress of faulty meters replacement

Period	No.of faulty meters			
	Opening balance	No. of meters detected	No. of meters replaced	Closing balance
April to August,2008		2,51,836	2,38,733	
September, 2008	6,97,171	87,677	72,280	7,12,568
October, 2008	7,12,568	69,786	70,465	7,11,889
November, 2008	7,11,889	91,033	69,217	7,33,705
December,2008	7,33,705	60,147	44,813	7,49,039
Total		5,60,479	4,95,508	

It is noted that faulty meter replacement is always short of targets and the number of meters replaced is much lower than number of faulty meters detected, which on a month to month basis shown an increase in the number of faulty meters in the system. In the past 9 months faulty meters in the system has increased by about 65,000. **The Commission observes that a large number of meters are becoming faulty regularly, which points towards the necessity of procuring high quality meters.**

The Board has stated that further reduction in losses requires huge funds, which is the reason for non-achievement of targets. However as has been done always, the Board could not produce any estimate of the total requirement of funds and the corresponding loss reduction that could be achieved, but simply stated that huge requirement of funds was there. The Commission so far has not disapproved any investments which are justifiable. While proposing the projects, the Board has to ensure that the proposals are financially and economically viable and technically feasible to get the approval. Such validated proposals always pass the regulatory scrutiny. The Board also stated in the filing as well as in the subsequent clarifications vide letter dated 7-2-2009, that arranging funds are not a limitation. Hence the contention of the Board that huge capital is required for loss reduction cannot be accepted. **The Commission directs that KSEB shall develop and implement comprehensive and viable plans for loss reduction and ensure continuous monitoring at higher levels of the Board.**

The above details beyond doubt shows that lack of achievement of loss targets are not due to the non-achievable targets fixed, but lack of enthusiasm shown by the Board to achieve the loss targets. It is also true that the Board do not have any estimate on the level of technical/commercial losses in the different voltage levels, which is primarily

required for planning investments for loss reduction. Even after repeated directions by the Commission, the Board did not take any effort to estimate the loss levels at different voltage levels. Since the 11kV metering has been complete, the Board could provide on a sample basis the estimate of losses in the 11 kV and below. In the present filing, the Board themselves have stated that energy audit has been initiated. Now the onus is on the Board to provide details to the Commission. Since no information is forthcoming from the Board, the Commission is forced to take a view that, now on, the capital investment programme should be supported by proper assessment of cost and benefits and system requirements without which, it may not be possible to get approval in the ARR.

The Board has projected internal loss level of 17.43% based on the unrestricted sales, which is about 1.27% less than the revised estimates for the year 2008-09 (18.69%). The Commission had fixed internal loss for the year 2008-09 as 17.92%. After having deliberated on the issue in detail, the Commission is of the view that for 2009-10, the targeted loss reduction shall be 1% from that approved for the year 2008-09 i.e., 17.92%. Accordingly, the loss target fixed for 2009-10 would be 16.92% as follows:

	Proposed in the ARR	Approved by the Commission
	Unrestricted	Restricted
Energy sales (MU)	13966	13844
Internal loss (%)	17.43%	16.92%
Net Energy input to KSEB System (MU)	16913	16665

The loss level approved by the Commission for the year 2009-10 is about 1.76% less than the revised estimates of KSEB (18.69%). It is also to be noted that, the loss reduction approved by the Commission is not much different from the proposal of the Board if the restricted sales and corresponding energy input is taken into consideration. Due to the power restrictions for the month of April and May 2009, the Board anticipates a reduction in sales to the tune of 286 MU and energy requirement to the tune of 389.59 MU. The Board further estimated an excess sale of 164.7 MU for the month of April and May, totaling the sales to 13844 MU (13680MU +164MU). Considering the sale of 13844MU, the energy requirement at the KSEB bus proposed by the Board is 16665MU (16913MU-248 MU i.e., instead of purchase of 837.54MU, the purchase required is 589.3MU due to restrictions). Hence, the loss level as per the estimates of the Board based on restricted sales would also work out to 16.93%.

3.5 AT&C Loss

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. The Board has provided collection efficiency excluding dues from Government departments for the year 2007-08 and 2008-09 as 94.82% and 94.68%. Based on figures submitted by the Board, the AT&C loss is worked out as follows:

	2006-07	2007-08	2008-09
T&D loss	21.47%	20.02%	18.69%
Collection efficiency	97.85%	94.82%	94.68%
AT&C loss	23.16%	24.21%	23.07%

The collection efficiency and hence the AT&C loss levels for 2007-08 have increased compared to 2006-07. In the Order on ARR & ERC for 2008-09, the Commission had fixed collection efficiency as 98%. But the collection efficiency target for the year 2008-09 given by the Board is comparatively lower i.e., 94.68% without considering the dues from Government departments. The Commission directs that the Board shall file consumer category wise collection efficiency against current demand in the next filing onwards. The Commission retains the level of 98% as the collection efficiency target for 2009-10 against the current demand.

The Commission issues following directives to the Board for compliance:

The Board has already committed to initiate energy audit, however the details are not yet provided. It is hereby directed that the Plan of Energy Audit shall be filed within two months from the date of this order. The Commission shall evaluate the plan and necessary directions will be issued then.

The direction issued in the previous ARR Order regarding load flow studies may be complied with so as to estimate the technical losses in the system.

The Board has to initiate a study for assessing loss levels in 33kV/11kV system and LT system separately. Study shall be conducted for a representative urban and rural circle. The preliminary results shall be filed within 6months from the date of this order.

CHAPTER – 4

REVIEW OF CAPITAL EXPENDITURE

4.1. Introduction

The Board in its ARR filing recognized that in order to cater to the future requirement of energy massive investment programmes are required. The electricity demand has been increasing at a pace of 8% per year and as per 17th Power Survey, additional requirement to the tune of 1000 MW is required for the next 5 years. The Board is planning to provide affordable and reliable electricity to all households on demand by 2011, and to add 608 MW of hydro power during the 11th Plan period. Further the Board has taken steps for the development of Bitarani coal block allotted by the Government of India. The activities completed so far on the development of coal block are (1) submission of bank guarantee for Rs.75 crore, (2) engagement of M/s CMPDIL for preparation of mining plan and infrastructure development works, (3) engagement of M/s Xavier Institute for conducting socio economic studies and (4) submission of mining lease application to the District Collector, Angul.

4.2 Capital expenditure for 2008-09 and 2009-10

The Board has proposed Rs.1022.38 Crore in the ARR for 2007-08, which was revised to Rs.953.17 Crore subsequently. Similarly, for the year 2008-09, Rs.1145 Crore was proposed which was revised to Rs.1047.6 Crore. For 2009-10 the capital expenditure proposed is Rs.1377.10 crore which is about 31% more than the revised estimates for 2008-09, as shown below.

Capital Outlay for for 2007-08 to 2009-10

Particulars	(Rs. Crore)				
	As per ARR 2007-08	2007-08 Revised	As per ARR 2008-09	2008-09 Revised	2009-10 Proposed
Generation	336.22	344.53	540.00	310.37	403.33
Transmission	221.80	221.50	181.00	276.88	366.73
Distribution	464.36	386.09	419.00	456.25	600.64
Other works		4.05	5.05	4.10	6.40
Total	1022.38	956.17	1145.05	1047.60	1377.10

In the generation sector, capital outlay for projects include 5 ongoing programmes, 16 new schemes and 7 wind and non-conventional projects. Further additional capitalization of 11 completed projects and 2 thermal projects are also included as part of capital expenditure programme. In the present filing following projects and their outlay are proposed.

Generation Projects proposed in 2009-10

Name of the Project	(Rs Crore)	
	2008-09 (Revised)	2009-10 (Proposed)
Kuttiyadi Tailrace	3.30	0.50
Neriamangalam Extension	10.39	0.38
Kuttiyadi Addl. Extn. Scheme (2x50 MW)	35.00	27.00
Azhutha Diversion	1.10	0.00
Kuttiar Diversion	2.35	0.45
Pallivasal Extension	24.00	45.00
Kuttiadi Extension Scheme (50 MW)	0.00	0.93
Total	76.14	74.26
Tendered projects		
Maniar Tail Race	1.10	6.00
Thottiar HEP	10.00	12.00
Sengulam Augmentation	1.00	1.00
Wind Farm at Ramakkalmedu	5.00	25.00
Adynpara	4.80	7.10
Poozhithodu	6.36	2.50
Athirappilly	2.00	11.00
Total	30.26	64.60
New projects		
Chathankottunada-II	0.50	2.00
Vilangad	0.50	2.00
Peechi	1.86	2.00
Mankulam	1.00	2.00
Total	3.86	8.00
Anakkayam SHP	0.50	2.00
Sengulam Tail Race	1.00	1.00
Barapole	0.50	6.00
Perumthenaruvi	0.50	2.00
Kuttiadi Addl Ext Tail race	1.00	2.00
Karapuzha Dam toe	0.50	0.50
Total	4.00	13.50

Name of the Project	(Rs Crore)	
	2008-09 (Revised)	2009-10 (Proposed)
Renovation and modernization		
Neriamangalam	0.25	0.00
PPSHUP	0.15	0.05
Sabarigiri	25.00	25.00
Idamalayar - 110/66 kV Substation	0.10	0.25
Porginalkuthu	3.05	3.25
Sholayar	0.75	0.75
Total	29.30	29.30
Existing projects		
Total	24.82	16.06

In addition, the Board has also included renovation and modernization, Baitarni West Coal block development etc., as part of the existing programme.

Capital expenditure proposed for Generation

Particulars	(Rs. Crore)	
	2008-09	2009-10
Ongoing hydel projects	76.14	74.26
Tendered Projects	30.26	64.60
Projects proposed to be tendered before Mar-09	3.86	8.10
Projects proposed to be tendered during 2009	4.00	13.50
Capital outlay for existing projects	24.82	16.06
Renovation and modernization	19.30	29.30
Survey & Investigation works	1.59	2.41
Revamping seismic network	0.90	1.17
Dam safety works	5.14	15.23
R&D Civil works	0.44	2.20
Administrative complex		
(a) Building under construction	0.82	2.65
(b) Construction of model section offices		9.75
Fabrication works in CM division	75.00	95.00
Upgradation of mechanical facilities at Pallom and Angamally	0.25	0.35
Bitarni Coal project	35.00	20.00
Rehabilitation of Panniar	22.00	6.00
Rebuilding of Sabarigiri	6.00	26.00
Other Civil works	4.85	16.76
Total	310.37	403.33

For 2008-09, in transmission and distribution, the revised allocations are Rs.276.88 Crore and Rs.456.25 Crore respectively. The outlay for 2009-10 for transmission and distribution are Rs. 366.73 crore and Rs.600.64 Crore respectively. The Board did not file the progress of capital works along with the petition. The Commission as part of the clarification exercise sought details on the progress of the various programmes, though vide letter dated 7-2-1009, the information filed, under most of the heads was incomplete.

4.3 Objections of Stakeholders

Upabhokthru Samrakshana Samithi, Beypor has complained about the lack of preparedness of the Board to bring back the Panniyar Generating Station due to which the power shortages are continuing. The Samithi is of the view that generation projects are not implemented in a time bound manner which resulted in huge loss to the Board. They have requested that due to power shortage extension of electric tractions to Northern Kerala is likely to be delayed further.

The Association stated that Board shall file the capital expenditure only in accordance with the Regulations. However even after repeatedly giving objections on the issue, no detailed information has been filed. Even after the Commission's insistence on filing the required information on capital expenditure such as cost and benefits, details of the projects, financing plans, etc., the Board has not filed the required information for enabling prudence check. The Association pointed out that in the case of generation projects, in the original filing for 2008-09 and the revised filing this year, a difference of Rs.203 crore was made as shown below.

Name of the Project	(Rs. Crore)		
	2008-09 (original proposal))	2008-09 (Revised)	2009-10 (Proposal)
Kuttiadi tail race	1.55	3.30	0.50
Neriamangalam extension	2.50	10.39	0.38
Kuttiadi Additional extension	66.50	35.00	27.00
Azhutha diversion		1.10	0.00
Kuttiar diversion		2.35	0.45
Pallivasal extension	50.00	24.00	45.00
Adiyanpara	15.00		
Athirappilly	104.00		

Name of the Project	(Rs. Crore)		
	2008-09 (original proposal))	2008-09 (Revised)	2009-10 (Proposal)
Thottiar	21.10		
Barapole	19.00		
Total	279.65	76.14	73.33

By doing so, the Board has claimed improper benefits, by way of interest on borrowings and depreciation. They strongly pointed out that the lack of detailed information provided by the Board is a serious deficiency in the filings of the Board and is seen to be habitual and a norm rather than exception. Hence, the Association requested the Commission to disallow all the proposed capital expenditure of the Board.

4.4 Analysis and decision of the Commission

The Commission in the previous Order has mentioned the lack of progress of capital expenditure programmes. Many objectors have commented about the capital expenditure programme of the Board. The major complaint was the non-availability of information from the Board for continuous monitoring of the projects. The Board was submitting the investment proposal as part of the annual budget, without providing the scheme wise details with the viability studies of the projects. Due to this when the projects are commenced, cost and time over run have been taking place, which in turn are charged to the consumers. The project monitoring and evaluation could not be taken up effectively. The Commission in the past also had made it clear that for the approval of the investment plan, project wise details with the necessary information therein on requirement and viability of the project, including the financials are to be submitted. **In reply to the details called for on the feasibility of projects, the Board in the letter dated 26-3-2009, has casually stated that decisions on all investments in generation, transmission and distribution are taken by the Board only after feasibility studies and financial evaluation. However, the Board should take note that the Commission is seeking the details on such studies for proper regulatory scrutiny, which the Board is continuously withholding.** Before passing the cost to the consumers, the Commission is duty bound to verify the prudence of the investment decisions taken by the Board and the consumers have the right to know that the projects taken up are economically/financially viable, since they are paying for such projects. Further licence conditions of the Board stipulate the manner in which capital expenditure approval are to be obtained.

The Association has argued that it has been the practice of the Board to inflate the requirements of capital expenditure to get approval for higher amount of borrowing and thereby claiming higher interest and depreciation charges. In most of the cases, capital expenditure in the span of 6-12 months (between two consecutive ARR filing) have been completely revised and even projects have been changed. As pointed out by the Association, the outlay provided is drastically changed for most of the projects. Going by the information furnished by the Board, there is merit in the arguments of the Association.

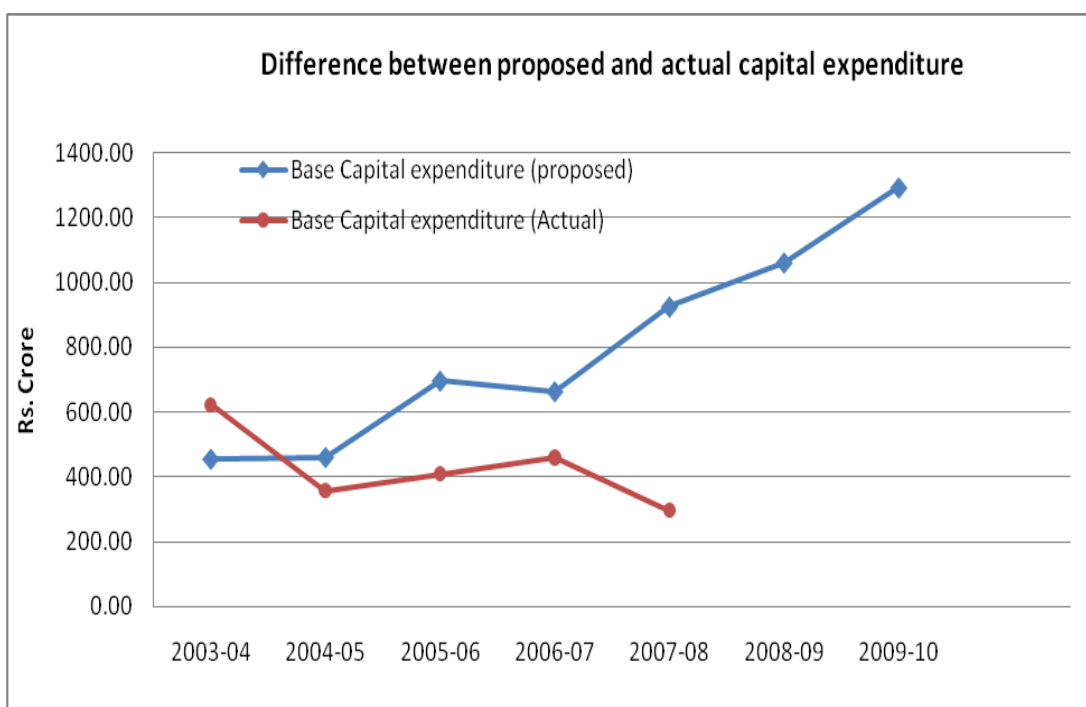
The Commission sought project wise details of generation, transmission and distribution schemes such as project completion cost, date of commencement, proposed date of completion, amount spent so far, balance requirement, time cost overrun etc., Though the Board had provided the information, it was incomplete and inconsistent with the details filed in the ARR. Hence Commission could not use the information for the review of the capital expenditure programme.

The Commission has analysed the capital expenditure proposed by the Board in the ARR and the actual expenditure and the deviations. The following table gives the details.

Capital expenditure proposed in ARR and actual (2002-03 to 2009-10)

Proposed in the ARR	Rs. Crore							
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	
Capital Expenditure	453.40	459.01	695.21	662.60	924.49	1061.15	1293.00	
IDC capitalized	115.45	115.73	99.51	53.30	37.11	25.75	27.87	
Other expenses capitalized	119.25	123.53	158.95	43.90	65.26	59.19	55.82	
Total capital expenses	688.10	698.27	953.67	759.80	1026.86	1146.09	1376.69	
Expenses transferred to Gross asset	924.65	707.84	905.68	603.33	821.48	912.07	1189.26	
Actuals	(Rs. Crore)							
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08		
Capital Expenditure	235.36	621.93	357.00	407.82	459.13	296.30		
IDC capitalized	101.08	78.11	62.04	48.50	35.13	29.33		
Other expenses capitalized	118.15	109.05	42.88	43.61	43.19	48.08		
Total capital expenses	454.59	809.09	461.92	499.93	537.45	373.71		
Expenses transferred to Gross asset	801.37	968.51	501.42	651.65	505.23	467.70		
Contribution received for cost of capital assets	155.88	185.26	201.23	265.83	216.14	186.47		
Difference	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08		
Capital Expenditure		168.53	-102.01	-287.39	-203.47	-628.19		
Total capital expenditure		120.99	-236.35	-453.74	-222.35	-653.15		
Expenses transferred to Gross asset		43.86	-206.42	-254.03	-98.10	-353.78		

It can be seen from the table that especially after 2004-05 when compared with the projections made in the ARR, the actuals are substantially lower. In 2007-08 though Rs.1027 Crore was projected as capital expenditure but the actual expense was only Rs.373 Crore. It is also to be noted that in the past, the maximum capital expenditure made was Rs.809 crore in 2003-04. Since then capital expenditure was never been higher than Rs.550 Crore. However, the projection made was always close to Rs.1000 Crore like a ritual. For 2009-10, the Board proposed about 31% increase in outlay, which by any yard stick is high. The difference between projected capital expenditure and actual capital expenditure between 2003-04 and 2007-08 is shown in the diagram below:



The Commission has also noticed similar trends in the previous order also. In the above circumstances, it is evident that the actual borrowing requirements for the year 2009-10 would be much less. **Further, from now on for approval of projects, scheme wise details are to be submitted. In its absence which such projects cannot be allowed to be capitalized and interest commitments cannot be allowed in the tariff.**

In the case of Baitarni Project, considering the power shortages, the pace of steps for utilizing the coal block is not as expected as it would be. By the time, the mining operations begin; the generation project should be ready so as to utilize the coal in the most economical manner. However, even after the lapse of more than one year after the allotment of the coal block, the Board has not finalised even the initial steps. In the letter dated 26-3-2009, the Board has stated that it has been considering the possibility of transferring its share of coal from Baitarni coal field to the proposed 2400 MW Cheemeni Power project. The Government has ordered that KSIDC and KSEB will float a special purpose vehicle for proceeding with the project, and other aspects are yet to be finalized. The Commission is of the view that, based on the information submitted, the Board/Government has not initiated basic steps necessary for fulfilling the establishment of the power station of such a size. When such a large scale project is to be taken up, as a preliminary step, a pre-feasibility study by including parameters such as, demand assessment (domestic/other states), location, size of the project/unit size, technology, fuel (type supply/transport/handling) options, transmission requirements/options, financing requirements, environmental factors etc., by considering different options should have been initiated. Based on the feasibility study only, decisions on the various options would ideally be considered. Unfortunately, there is no mention by the Board on the steps taken towards this direction so far, and precious time is wasted for conceptualization of project.

The Commission also reiterates that, the initial fund requirements of the Project are to be charged separately, which can be included in the project cost and capitalization of the costs would be allowed only after the plant is put into use. For the approval of the scheme complete details including feasibility, DPR, Financing plan etc., are to be submitted in line with requirements as per existing rules and regulations, without which the expenses will not be allowed to be recovered from the tariff.

The Commission in the previous order has directed that detailed implementation plan for various important projects is to be prepared and review is to be conducted on a monthly basis, which was never complied with. The Commission once again reminds that the directions contained in the previous orders and present order shall be complied scrupulously by the Board.

CHAPTER – 5

ANALYSIS OF ANNUAL REVENUE REQUIREMENTS

5.1 Introduction

The Board has projected an Aggregate Revenue Requirement (ARR) of Rs.6113.22 Crore for 2009-10 including the statutory return of 14% on equity. 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 2009-10 estimated by the Board is 17229.62 MU. The peak demand estimated for the year is 3084 MW, considering 6% growth over the peak demand met during 2007-08 (2745 MW). Two projects, Neriamangalam extension (25MW) and Kuttiadi Tail race (3.75 MW) were commissioned during 2007-08. Kuttiadi Additional extension (100 MW) is expected to commence commercial operation during 2009-10.

Based on the ten year inflow data (from 1999-00 to 2008-09), the average inflow is estimated as 6530 MU. Based on the present reservoir storage and past trend in inflow it is estimated that 15.5 MU per day hydro generation is expected for the two months (April and May) of the current water year. Based on the 10 year average, average daily generation of 17.89MU is expected for the period from June 2009 to March 2010. Hence the total hydro availability for the next financial year is estimated as 6384.5MU (15.5MU/day for two months & 17.89 MU/day from June,09 to March, 2010). In addition to this, 209 MU generation is expected from Kuttiyadi additional extension thus aggregating the hydro generation expected for the year 2009-10 at 6593.5MU. By considering 0.5% auxiliary consumption, the net hydro availability would be 6560.53MU.

The Board has also stated that restoration of Panniar hydro electric project would be completed by 2008-09 and full generation from the project is expected. Further two more units of Sabarigiri project are also expected into service during this financial year.

The Board has estimated the availability of hydro power capacity after the maintenance considering an allowance of 5% for frequency variation, voltage drop, reactive loading etc.,

In 2009-10, the Board is planning to operate BDPP and KDPP to the full available capacity. The major limitation cited for non-utilisation of BDPP is the availability of fuel. According to the Board daily generation 0.5 MU is expected from BDPP and 1.2 MU from KDPP. ie., a total of about 182.5 MU from BDPP and 438.5 MU from KDPP. Based on the price of LSHS as on 16th November, 2008, the variable cost of generation is estimated as Rs.5.00/kWh for BDPP and KDPP. The total generation cost from these plants is estimated to be Rs.310.25 Crore as follows:

Generation and cost of BDPP and KDPP for 2009-10

Generating station	Gross Generation	Auxiliary consumption	Net Generation	Variable cost	Total Variable cost
	(MU)	(MU)	(MU)	(Rs/kWh)	(Rs in Crore)
BDPP	182.50	4.56	177.94	5.00	91.25
KDPP	438.00	10.95	427.05	5.00	219.00
Total	620.50	15.51	604.99		310.25

5.2.1 Purchase of power

As stated in the petition, the present allocation from Central Generating Stations is about 1034MW. In addition, two projects NLC expansion Stage II and Kudamkulam nuclear station are expected to start commercial operation from August 2009 and December 2009 respectively.

The capacity available from CGS stations for the year 2009-10 and the estimated fixed cost projected by the Board are given below.

Allocated capacity and fixed cost of CGS

Sl No	Power Plant	Capacity allocation	Fixed Cost
		(MW)	(Rs in Crore)
1	TALCHER – II	427.20	186.35
2	NLCII - Stage I	63.13	12.71
3	NTPC (RSPTS) & NEW	306.07	78.68
4	NLCII - Stage II	90.13	19.74
5	NLC – Expansion	68.71	34.94
6	MAPS	23.01	24.64
7	KAIGA	55.88	129.51
8	NLC-Exp-II	70.00	18.99
9	Kudamkulam	133.00	82.82
	Total	1237.13	588.38

The Board has stated that the fixed cost shown above may change if CERC finalises the norms for 2009-14. The variable cost of power from central stations has been estimated based on the actuals from April 2008 to September 2008. In the case of Nuclear power stations single part tariff is applicable i.e., Rs.1.98 for MAPS and Rs.3.09 for KAIGA. For Koodamkulam Rs.3.25/kWh is taken. The average cost of NLC expansion is adopted for new NLC Exp Stage II.

The Board has estimated the availability of energy from the central generating stations based on the CERC/DAE norms. The average availability expected from CGS is about 900MW/ 17.99 MU from April to September 2009 and about 950 MW/18.555MU from August to November, 2009 and about 1050 MW/21.23 MU from December 2009. The Board has assumed 4.5% transmission loss in PGCIL system. Accordingly, the total power availability and cost are as follows.

Estimated Cost of Power Purchase from the CGS in 2009-10

Sl No	Source	Energy scheduled at generator bus	External loss	Net Energy input into KSEB system	Fixed cost	Variable cost	Total cost
		(MU)	(MU)	(MU)	(Rs.Crore)	(Rs.Crore)	(Rs.Crore)
1	Thalcher - II	2740.41	123.32	2617.09	186.35	213.75	400.10
2	NLC-II - Stage-1	373.76	16.82	356.94	12.71	47.84	60.55
3	NTPC- RSTPS	1967.06	88.52	1878.55	78.68	251.78	330.47
4	NLCII - Stage II	533.61	24.01	509.60	19.74	68.84	88.58
5	NLC - Exp	406.34	18.29	388.05	34.94	48.76	83.71
6	MAPS	124.44	5.60	118.84	24.64	0.00	24.64
7	Kaiga	419.14	18.86	400.28	129.51	0.00	129.51
8	NLC- Exp-II	206.39	9.29	197.10	18.99	24.77	43.75
9	Kudamkulam	254.83	11.47	243.36	82.82	0.00	82.82
	Total	7025.97		6709.80	588.38	655.74	1244.13

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.10.48 Crore for KPCL, Rs.91.8 Crore for BSES and Rs.96.73 Crore for RGCCPP. The average cost of power from BSES and RGCCPP is proposed as Rs.4.00/kWh and for KPCL Rs.5.00/kWh is assumed. Based on this schedule, the power purchase cost from IPPs estimated by the Board is as follows:

Cost of power purchase from IPPs

Source	Energy (MU)	Fixed cost (Rs.Cr)	Variable Cost		Total Cost (Rs.Cr)
			Rate (Rs/kWh)	Amount (Rs.Cr)	
KPCL	124.78	10.48	5.00	62.39	72.87
BSES	968.60	91.80	4.00	387.44	479.24
RGCCPP	999.90	96.73	4.00	399.96	496.69
Total	2093.28	199.01		849.79	1048.80

In addition to the above IPPs, the Board has proposed purchase from Wind energy generators, Ullumkal SHP and MPS Steel Co-generation Plant. The Board has entered into PPA with WEGs for 21.90 MW at Agali and Ramakkalmedu. The Board expects about 29.5 MU from WEGs @ Rs.3.14 /kWh. The estimated cost would be about Rs.9.26 crore.

Ullumkal SHP with installed capacity of 7 MW would be operational from this year and the cost of purchase is Rs. 2.44/kWh. The total generation expected is 34 MU at a cost of Rs. 8.30 crore. KSEB has stated that M/s MPs Steel has approached KSEB for sale of 8 MW power at the rate approved by KSERC. KSEB expects to purchase 40 MU from the plant @2.76/kWh which is according to the Board is the rate approved by the Commission for Bagasse type co-generation plant (though the actual rate approved by the Commission is only Rs.2.55/kWh). Accordingly, the total cost of Rs.28.82 crore is estimated from these three sources.

Total generation and purchase proposed by KSEB for the year 2009-10 from the above sources is 16392MU as against the energy requirement of 17229.62 MU, hence the shortage of 837.55 MU is expected. The month wise energy deficit and the means of tackling energy shortage proposed by the Board is as follows.

Energy Shortage projected for 2009-10

	Energy Demand	Energy Shortage	Remarks
Month	(MU)	(MU)	
April,09	1452.69	205.5	KSEB proposed to continue the restrictions imposed to till May-09
May,09	1533.46	242.5	
June,09	1335.86	43.41	Total shortage is 389.59 MU. KSEB shall meet the short fall by procuring power through traders/ power exchange
July,09	1329.43	52.88	
Aug,09	1388.44	1.83	
Sept,09	1372.29	9.25	
Oct,09	1424.25	101.4	
Nov,09	1404.64	49.89	
Dec,09	1481.07	17.21	
Jan,09	1504.21	11.76	
Feb,09	1451.59	75.81	
Mar,09	1551.7	26.07	
Total	17229.62	837.5	

The energy shortage for the months of April and May, 2009 is estimated as 447.99 MU, and the Board proposes to continue the restrictions imposed to the tune of 20%. However, it is expected that in April and May, about 164.7 MU may be consumed over and above the restriction as excess consumption at higher rates. The energy requirement for the sale of 164.7 MU is estimated as 199.76 MU.

The shortage from June 2009 to March 2010 is estimated as 389.56 MU, hence the total shortage is 589.32 MU, which is proposed to be met through the purchase from traders at a rate of Rs.7.50/kWh. The Board has also stated that due to the strict instructions from CERC, chances for UI overdrawl are limited and UI cannot be treated as a regular source of power.

Merit Order Stack as projected by KSEB

Sl. NO	Source	Estimated variable cost for 2009-10 (Rs/kWh)	Sl. NO	Source	Estimated variable cost for 2009-10 (Rs/kWh)
1	Hydel	0.00	12	Kaiga	2.94
2	Thalcher - II	0.78	13	Kaiga- Stg-II	2.94
3	NLC - Exp	1.20	14	Wind IPP	3.14
4	NTPC- RSTPS	1.28	15	Kudumkulam	3.25
5	NLC-II - Stage-1	1.28	16	BSES	4.00
6	NLC- Exp- Stage-II	1.29	17	Kayamkulam	4.00
7	NLCII - Stage II	1.29	18	KDPP	5.00
8	MAPS	1.89	19	KPCL	5.00
9	Wind -Kanjikode	2.00	20	BDPP	5.00
10	Ullumkal IPP	2.44	21	Traders	7.50
11	MP steel Co-Gen	2.76			

5.2.3 Transmission charges

Transmission charges proposed by the Board, payable to PGCIL based on the actuals from April 2008 to September 2008 are as follows:

Transmission charges payable

Sl No	Items	April-08 to September-08 (Rs. Crore)	Estimate for 2009-10 (Rs. Crore)
1	Southern region		
	Transmission charges	75.16	157.95
	ULDC Charges	6.24	13.11
	Sub total	81.4	171.06
2	NTPC Kayamkulam Transmission charges	9.97	19.94
3	Total transmission charges (excluding income tax, incentives etc)		191.00

In addition to the above, income tax, incentives, water cess, foreign exchange variation, etc., are also payable to CGS stations and PGCIL. Based on the actuals billed in the past four years the Board projects the same as Rs.78.31 Crore for 2009-10.

Other charges payable to CGS (Rs. Crore)

Source	2004-05 (actual)	2005-06 (actual)	2006-07 (Actual)	2007-08 (Actual)	2008-09 (Estimate)	2009-10 (Proj)
Generators						
Thalcher - II	4.03	-0.87	12.76	2.64	4.64	4.79
NLC-II - Stage-1	14.00	7.50			10.75	9.13
NTPC- RSTPS	57.64	23.80	27.21	54.70	40.84	36.64
ER	13.58	-19.08	0.00	0.22		
NLC-II - Stage-2	0.00				0.00	
MAPS	2.40	1.15	0.48	1.39	1.35	1.09
NLC (Exp)	2.73		1.94		2.34	2.14
Kayamkulam	0.00	0.00	0.00		0.00	
KPCL						
Kaiga	0.38	0.25	5.77	2.97	2.34	2.83
PGCIL						
Eastern Region	0.30	0.00	0.00	0.09	0.10	0.05
Southern Region	14.20		10.21	34.94	19.78	21.64
Kayamkulam	1.36					
Total	110.62	12.75	58.37	96.94	82.14	78.31

Based on the above, the Board projected total internal generation cost (excluding the cost of hydel stations) as Rs.310.85 Crore, Power purchase cost as Rs.3024.61 Crore, thus totaling to an amount of Rs.3335.46 Crore. Summary of total generation and power purchase cost proposed by the Board is as follows:

Internal generation and Power purchase proposed by KSEB for 2009-10

Source	Energy Produced /Purchased	Auxiliary Consumption	External Loss	Net Energy Input to KSEB T&D system	Fixed Cost	Incentive, Tax, etc.	Total Variable cost	Total Cost
	MU	MU	MU	MU	Rs. Cr	Rs. Cr	Rs. Cr	Rs. Cr
KSEB Internal								
Hydel	6593.50	32.97		6560.53				
Wind -Kanjikode	3.00	0.00		3.00	0.00	0.00	0.60	0.60
BDPP	182.50	4.56		177.94	0.00	0.00	91.25	91.25
KDPP	438.00	10.95		427.05	0.00	0.00	219.00	219.00
Sub total	7217.00	48.48		7168.52			310.85	310.85
Purchase from CGS								
Thalcher - II	2740.41		123.32	2617.09	186.35	4.79	213.75	404.89
NLC-II - Stage-1	373.76		16.82	356.94	12.71	9.13	47.84	69.68
NTPC- RSTPS	1967.06		88.52	1878.55	78.68	36.64	251.78	367.11
NLCII - Stage II	533.61		24.01	509.60	19.74		68.84	88.58
NLC - Exp	406.34		18.29	388.05	34.94	2.14	48.76	85.85
MAPS	124.44		5.60	118.84	24.64	1.09	0.00	25.73
Kaiga	419.14		18.86	400.28	129.51	2.83	0.00	132.34
NLC- Exp-II	206.39		9.29	197.10	18.99	0.00	24.77	43.75
Kudamkulam	254.83		11.47	243.36	82.82	0.00	0.00	82.82
IPPs								
KPCL	124.78			124.78	10.48		62.39	72.87
BSES	968.60			968.60	91.80		387.44	479.24
Kayamkulam	999.90			999.90	96.73		399.96	496.69
Wind	29.50			29.50			9.26	9.26
Ullumkal	34.00			34.00			8.30	8.30
MP Steel	40.80			40.80			11.26	11.26
Shortage/ purchase through traders	589.32			589.32			441.99	441.99
PGCIL charges								
Eastern Region				0.00	0.00	0.05	0.00	0.05
Southern Region				0.00	150.26	21.64	0.00	171.90
Kayamkulam				0.00	32.30		0.00	32.30
Sub total power purchase	9812.87				969.96	78.30	1976.34	3024.61
Total	17029.87	48.48	316.17	16665.23	969.96	78.30	2287.19	3335.46

5.2.4 Deliberations in the Advisory Committee:

Additional Secretary, Power Department, representing Government stated that immediate steps are to be taken to restore the generating units in Sabarigiri and

Panniyar. Shri. Sukesan mentioned that KSEB should not be allowed to buy power at high rates, and it should be informed to the Government. Shri. M. Ravindran Nair, stated that cost of power purchase from traders projected at Rs.7.50/kWh is higher in relation with the costs of power from RGCCPP and BDPP/KDPP. He suggested to harness the renewable sources like wind power to overcome the shortage. The Chairman of Institution of Engineers suggested that steps may be initiated to enhance the reservoir storage.

Shri . George Thomas, mentioned that the expenses projected by KSEB is always on the higher side. According to him the power purchase cost projected by KSEB especially for liquid fuel stations is to be reduced considering the fall in the international crude prices. He suggested that immediate steps are to be taken by KSEB to bring back the generating units in Sabarigiri and Panniyar which went to forced outage.

Shri.N.V Sood representing NTPC suggested that KSEB should try for swap arrangements with other constituents in the region to reduce the cost of power. According to him purchasing power from traders is costly and KSEB should initiate better commercial practices for utilizing the existing generating capacity. Shri. Viju Chacko, suggested to harness the non-conventional sources to overcome the power shortage.

5.2.5. Objections of stakeholders

Shri.Gopalakrishnan, Kollam argued that KSEB should pass on the benefit of low cost hydro power to the consumers. Cominco Binani Employees Union stated that, KSEB has shown less hydro generation potential than the actual. Similarly, availability from Central Stations have also projected less. According to them, the cost of generation projected for the BDPP and KDPP should be low considering the reduction in the price of fuel. The Association and M/s Binani zinc have stated that hydro generation proposed by the Board is about 1405 MU less than the availability. Kerala News Print Employees Union and Hindustan Paper Corporation Employees Association have also expressed similar opinion. The availability of power from CGS will improve since there is improvement in coal availability. Southern Railway mentioned that KSEB has not planned coal based stations well in advance even when ample port facilities are available in Kerala.

The Association estimated the hydro availability at 7284 MU considering the average inflow without lean periods of 2002-03, 2003-04, and 2008-09. The Association estimated the total availability of hydel generation as 8005 MU, thereby showing higher generation potential of 1405 MU than that is projected by the Board. Accordingly, the total quantum of energy required from non-hydel sources are estimated as 8447.5 MU. Regarding power purchase from sources other than CGS, the Association estimated the requirement as 1737 MU only. The total power purchase cost estimated at Rs.2180.7 Crore, and Rs.2385.6 crore if transmission charges also is included. The Association and M/s Binani zinc suggested that any variation in fuel prices should be allowed in terms of fuel a surcharge formula, which can be adjusted on a quarterly basis.

M/s Binani zinc further stated that considering the present LSHS price, the cost of generation from BDPP and KDPP would be Rs.4.50/kWh and not Rs.5.00/kWh projected by the Board. According to them, the power purchase proposed by the Board from the traders would artificially boost the ARR. The cost of power from RGCCPP, BSES and KPCL should be adjusted through the fuel price adjustment formula.

5.2.6 Analysis and decision of the Commission

The Commission analysed the proposal of the Board on generation and power purchase in detail. The total power purchase cost estimated by the Board for 2009-10 is Rs. 3024.61 crore, which is about 44% higher than the actual cost in 2007-08. Hence, the estimates of the Board need to be examined in detail.

The Board has estimated the hydro generation based on the past 10 year average in line with the methodology followed by the Commission in the previous years. The 10 year average is 6529.65 MU. Thus the average generation available would be 17.89MU per day from June, 09 to May, 2010. For April and May 2009, the Board expected an availability of 15.5 MU/day. Thus, KSEB estimated that total hydro generation for the year 2009-10 as 6384.5 MU (15.5 MU X 61 days of April and May 09 + 17.89MU X 304 days of June 09 to March 2010). Further, generation of 209 MU available from new projects (Kuttiadi Additional Extension) is also considered. Hence the total hydro availability for 2009-10 is estimated at 6593.5 MU (6384.5MU + 209 MU).

Taking into account three lean years (2002-03, 2003-04 & 2008-09) having inflow less than 6000MU, the average inflow is comparatively lower than the estimates in the

previous years. Many stakeholders have suggested that hydro generation potential is more than the estimates of the Board and argued to remove the lean years from estimation. The Commission is of the view that since 2003-04, the Commission is following the same methodology and to maintain consistency the Commission is not in a position to change the methodology for this year. Hence the average inflow estimate of the Board is accepted for 2009-10. However, Commission notes that, the typical situation of nearly 30% data (ie., 3 years) are below 6000 MU, and 60% data (ie., in 6 years) is less than average, there is no doubt that extreme values have influenced the mean value. One of the methods to overcome this limitation is to increase the data points. **Hence, the Commission is of the view that from next year onwards, the method of estimation is to be changed from 10 years to 20 years, which would reduce the influence of extreme values. Further, data for the current year (in the present case 2008-09) be excluded from calculating the average, as about 7 months data (ie., from November to May) for the current year have to be estimated as the actual is not available.**

The Board has stated that the full generation from Panniyar project will be available for 2009-10, as the rehabilitation would be completed by 31-3-2009. Further, the Board, in the proceedings on introduction of power restrictions, have committed that in Sabarigiri also 4 units will be functional by the end of current financial year. Even though, slippage is noticed in the commitment of KSEB, the Commission has to move forward with the original commitments made by the Board in this regard.

The Board has estimated that for the 2 months (April and May 2009), the hydro generation as 15.5 MU per day based on the storage level in November, 2008 and the same trend of inflow for the remaining period. However, considering the reservoir position as on 31-3-2009, there is a possibility of higher generation. The storage as on 31-3-2009 is 1639 MU. By providing 550 MU as reserve on 1-6-2009, the storage available would be 1089MU for 61 days. Hence the average generation possible is above 17 MU instead of 15.5 MU estimated by the Board. Further, if the inflow during the next 2 months due to the summer rains is also considered the hydro generation possible would be still higher. Hence, the Commission would consider a conservative estimate of 17MU for April and May, 2009. Thus the estimated hydro generation for 2009-10 would be about 91MU higher than the estimates of the Board. **Hence the Commission re-estimates the hydro availability at 6684.5MU.**

The Commission is of the view that a reference needs to be made on the present management of generating stations in this context. The Commission sought the progress of rehabilitation of Sabarigiri and Panniyar projects. The Board at several occasions have revised the schedule of commissioning of these projects after the accident. The Commission sought the details of the progress of rehabilitation of Panniyar Power house and related structures. On 17-9-2007, the Panniar Generation was flooded with sludge, mud and water due to bursting of No.2 penstock and failure of butterfly valve in the power house. The station was totally out of service since then. The Board has provided a status report on the same vide their letter dated 7-2-2009. The Board has constituted a task force for the rehabilitation of the station with Chief Engineer (PED) as the Chief Project Co-ordinator and Deputy Chief Engineer Generation Circle, Kothamangalam as the project Co-ordinator. The Board has stated the reason for delay as the intermittent rains in the initial days in the site and local labour problems, and delay in awarding contract for control system etc., The Board has committed that the rehabilitation of the Station will be completed by 31-3-2009. However even after the committed date the plant is still out of service.

The Commission has also sought the details of rehabilitation of Sabarigiri project. As per the statements of the Board, the accident took place at Sabarigiri HEP on 16-5-2008 at 4:48PM. Unit No.4 tripped and exploded with fire damaging units 4, 5 & 3. Unit 5 & 6 are in service from 31-7-2008 and 17-7-2008 respectively. Unit 2 was also put back into service after Renovation & Modernisation. In the case of unit 3, tender was floated on 2-1-2009 with closing date fixed as 27-1-2009, which was later extended to 28-2-2009. It is expected that work may be completed by 9/2009. In the case of unit 4, tender was floated on 7-10-2008 and the closing date was extended twice to 28-2-2009. The work is expected to be completed within 18 months. In the case of Unit 1, RMU started on 13-5-2008 and it is expected to be completed by 31-5-2009.

It can be seen that units which are put back into service were after the completion of RMU (Unit 5, 6, & 2). Even after a lapse of 10 months, the Board could progress only to a stage of invitation of tenders for the repair of damaged units (unit 3 & 4), which in any standards is dismal considering the urgent serious situation of power shortage and the resultant power purchase at exorbitant cost. If sufficient technical knowledge is not available within the Board, services of consultants should have been sought for speedy restoration of the work. Had the repair been made expeditiously, purchase of high cost energy could have been reduced to a large extent. The opportunity cost of delay in

putting back the machines in service is considerable, which is being shouldered by the consumers.

The Board in its letter dated 23-3-2009, stated that the norms of CERC and other SERCs are much higher than the amount actually incurred by the Board. Hence, the Board requested that if actual amounts are not admitted normative levels are to be fixed for various expenses. The Commission also have the view that normative levels based on the past performance and incorporating efficiency norms are to be followed in performance based regulation. The Commission would move towards such direction. Accordingly the Commission sought the details of availability of generating stations of the Board for 2008-09, and information submitted by the Board on the availability of generating stations for 2008-09 is given below:

Availability of generation stations (% of time)

Name of the Project	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
Kuttiyady	97.35	82.76	96.97	KES 89.30				
Sholayar	98.13	96.44	77.52					
Poringal	97.64	42.84	88.81	98.46	PLBE 97.77			
Pallivasal	29.86	75.76	99.51	98.16	89.52	82.78		
Sengulam	96.62	85.27	82.49	89.16				
Panniar	0.00	0.00						
Neriamangalam	97.58	89.75	99.06	NES 52.74				
Edamalayar	75.91	84.63						
Idukki	83.76	95.40	79.78	87.51	87.23	87.54		
Sabarigiri	15.64	0.00	16.24	16.28	65.54	75.09		
Kallada	86.86	80.79						
Madupetty	79.03							
Peppara	59.48							
Kakkad	93.05	96.73						
Chembukadavu Stage 1	24.36	40.34	24.68					
Chembukadavu Stage 2	25.77	22.67	35.32					
Malankara	66.44	2.99	97.64					
Lower Meenmutty	0.00	90.32	36.30					
Urumi 1	40.01	40.71	29.90					
Urumi 2	43.75	35.26	25.36					
Malampuzha	0.00							
BDPP	51.09	96.89	58.37	88.40	75.49			
KDPP	93.44	0.00	87.11	73.89	66.00	80.00	60.22	89.00

However, it may also be noted that present level of performance of the Board as shown above is much lower than the norms fixed by CERC.

5.2.6.1 Availability of power from CGS

The Board has estimated generation from CGS stations based on the norms and target availability fixed by CERC. Further, two stations NLC Expansion stage II and Kudamkulam are expected to be operational from August 2009 and December 2009 respectively. The total energy available from CGS at the generator bus is estimated at 7025.97 MU. Compared to previous years, the estimation of the availability from CGS is lower. CERC has revised the operational norms including Auxiliary Consumption for the tariff period starting from 1-4-2009. The Commission has considered the revised norms, which is as follows.

Existing and revised norm for CGS

Station	Aux. Consumption		Availability	
	Existing norm	Revised norm	Existing norm	Revised norm
Talcher	7.50%	6.50%	80%	85%
RSTPS I&II, III	7.85%	7.08%	80%	85%
NLC II -Stage II	10.00%	10.00%	75%	75%
NLC I Exp	9.50%	9.50%	75%	80%
NLC II -Stage I	10.00%	10.00%	75%	75%

Source: Statement of Reasons on Tariff Regulations published by CERC

The Commission has analysed the past trends in the availability of power from CGS stations. The average PLF of central stations are much higher than the target availability norms especially in the case of Ramagundam and Talcher as shown below.

Actual PLF Achieved by CGS Stations

CGS	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Average
Talcher	73%	82%	82%	84%	90%	94%	88%
RSTPS I&II, III	92%	89%	91%	86%	89%	90%	89%
NLC II -Stage II	80%	80%	72%	72%	73%	81%	75%
NLC I Exp		54%	88%	84%	89%	89%	87%
NLC II -Stage I	83%	74%	72%	70%	57%	82%	70%

Source: Statement of reasons published by CERC

Considering the much higher PLF achieved by the station especially Ramagudam and Talcher, the Commission is of the view that the average PLF achieved by the stations is to be used for estimation of energy availability, besides the lower PLF (70%) used for NLCII Stage II. Further, the Board has proposed Rs.78.31 Crore as other charges for CGS, which is inclusive of incentives payable on account of better performance. Since, incentives are allowed as part of the cost, considering the past average performance is justified. Accordingly, the Commission re-estimates the availability from CGS stations as below.

Energy Availability from CGS

Power Plant	Allocation (MW)	Projection by KSEB			Approved by KSERC		
		Aux consumption	PLF	Energy available (MU)	Aux consumption (Revised CERC Norm)	PLF	Energy available (MU)
TALCHER – II	427	8.50%	80%	2740	6.50%	88%*	3079
NLCII - Stage I	63	10.00%	75%	374	10.00%	70%*	348
NTPC (RSPTS)	306	8.50%	80%	1967	7.08%	89%*	2217
NLCII - Stage II	90	8.50%	75%	534	7.08%	75%*	534
NLC – Exp	69	10.00%	75%	406	10.00%	87%*	471
MAPS	23	10.00%	68.5%	124	9.50%	68.5%	124
KAIGA	56	10.00%	68.5%	419	10.00%	68.5%	419
NLC-Exp-II	70	10.00%	75%	206	10.00%	75%	206
Kudamkulam	133	10.00%	75%	255	10.00%	75%	255
Total	1237			7026			7655

*Average PLF for the past 5 years

5.2.6.2. Liquid Fuel Stations

The Board has considered a gross generation of 620.5 MU from the diesel stations, KDPP and BDPP at a rate of Rs.5/kWh. The availability from the IPPs using liquid fuel (RGCCPP, BSES, KPCL) is taken as 2093.58 MU @ Rs.4/kWh from RGCCPP & BSES and Rs.5/kWh from KPCL. As per the ARR, the Board has estimated the price as on November 2008. Since then the price of fuel has changed/increased. Hence the Commission decides to adopt the latest cost data. The Commission has obtained the rates for Naphta and LSHS for the month of March, 2009. The average rate of naphtha is about Rs.26000/MT and LSHS is about Rs.21500/-. Accordingly, the Commission

revises the rates to Rs.4.75/kWh for naphtha stations and Rs.4.85/kWh for LSHS stations to account for the recent changes in fuel price even though higher than that proposed by the Board from naphtha stations.

The Board has considered energy from other IPPs (wind 29.5 MU, Ullumkal 34 MU and M/s MPS Steel Ltd. 40.80 MU). In the case of wind and Ullumkal SHP, the Commission has approved the power purchase rate. In the case of power purchase from M/s.MPS Steel, the company has filed a petition for determination of tariff and the Commission is processing the petition. Since the rate for the purchase from M/s MPS Steel is still not yet finalised, the Commission is not in a position to consider the generation from this plant in the ARR. Purchase from this plant would be considered once the Commission has taken decision on the tariff and other related issues.

Further, the Board has sought purchase through traders to the tune of 589.32 MU. The Commission has sought details from the Board on the plan and the details of agreement entered into by the Board for short term power purchase proposed by the Board, which has a commitment of about Rs.442.00 Crore. In the letter dated 26-3-2009, the Board stated that it is too early to formulate a strategy for power purchase to meet the shortages. According to the Board, the shortage is met through inviting quotation from short term market on a day ahead basis/on a need basis. The Commission is of the view that the stand taken by the Board clearly shows lack of short term planning and the Board is aiming at meeting the shortage by purchasing from the power market on a day ahead basis by exposing the consumers to huge price risk. Even after the bitter experience in the year 2008-09, the Board has not made any programme to mitigate the risk of shortages by planning ahead by entering into agreement for barter/purchase in advance or for hedging the risk, which is a clear case of the fire-fighting practice followed by the Board. In any case, based on the assessment made by the Commission on hydro and CGS availability, the Commission has concluded that additional purchase is not required to the extent proposed by the Board. Accordingly, the generation and power purchase for 2009-10 is decided as follows:

Energy generation & Purchase approved

Sources	Proposed in the ARR (MU)		Approved (MU)	
	Gross Energy	Net energy Available at KSEB Bus	Gross Energy	Net energy Available at KSEB Bus
Hydro	6593	6561	6685	6651
Wind	3	3	3	3
BDPP	183	178	183	178
KDPP	438	427	438	427
Internal Total	7217	7169	7308	7259
Thalcher – II	2740	2617	3079	2941
NLC-II - Stage-1	374	357	348	333
NTPC- RSTPS	1967	1879	2217	2118
NLCII - Stage II	534	510	534	510
NLC – Exp	406	388	471	450
MAPS	124	119	124	119
Kaiga	419	400	419	400
NLC- Exp-II	206	197	206	197
Kudamkulam	255	243	255	243
CGS Total	7026	6710	7655	7310
KPCL	125	125	125	125
BSES	969	969	969	969
Kayamkulam	1000	1000	1000	1000
Wind	30	30	30	30
Ullumkal	34	34	34	34
MPS Steel	41	41		
IPPs Total	2198	2198	2157	2157
Purchase from Traders	589	589		
Total	17030	16665	17119	16726
Energy requirement at KSEB BUS		16665		16665
Surplus				61

Hence the Commission estimates the total availability of energy at KSEB Bus as 16726MU. Considering the energy requirement of 16665 MU at the KSEB bus, there would be surplus energy of 60 MU. Ideally the surplus would be disallowed from the high cost stations. The Commission after analyzing the situation, came to the conclusion that, the surplus arrived at can be considered as cushion, which may be used if additional purchase is required to meet the peak/energy shortage if any. Hence, no disallowance is made on the power purchase cost on this account. The Commission also notes that the purchase from traders as proposed by KSEB is also not required and

hence disallowed to the extent stated above. Further KSEB could not produce any material to support specific plans on short term purchase. The total generation and power purchase allowed are as follows:

Power purchase and generation cost approved

Source	Energy Produced /Purchased	Net Energy Input	Fixed Cost	Incentive, Tax, etc.	Variable cost /Unit	Total Variable cost	Total Cost
	MU	MU	Rs. Cr	Rs. Cr	Rs/kWh	Rs. Cr	Rs. Cr
KSEB Internal							
Hydel	6685	6651					
Wind –Kanjikode	3	3			2.00	0.60	0.60
BDPP	183	178			4.85	88.51	88.51
KDPP	438	427			4.85	212.43	212.43
Sub total	7308	7259			4.84	301.54	301.54
Purchase from CGS							
Thalcher – II	3079	2941	186.35	4.79	0.78	240.17	431.31
NLC-II - Stage-1	348	333	12.71	9.13	1.28	44.60	66.43
NTPC- RSTPS	2217	2118	78.68	36.64	1.28	283.81	399.14
NLCII - Stage II	534	510	19.74		1.29	68.84	88.58
NLC – Exp	471	450	34.94	2.14	1.20	56.55	93.64
MAPS	124	119	24.64	1.09		0.00	25.73
Kaiga	419	400	129.51	2.83		0.00	132.34
NLC- Exp-II	206	197	18.99		1.20	24.77	43.75
Kudamkulam	255	243	82.82			0.00	82.82
IPPs							
KPCL	125	125	10.48		4.85	60.52	72.87
BSES	969	969	91.80		4.75	460.09	551.89
Kayamkulam	1000	1000	96.73		4.75	474.95	571.68
Wind	30	30			3.14	9.26	9.26
Ullumkal	34	34			2.44	8.30	8.30
PGCIL Charges							
Eastern Region			0.00	0.05			0.05
Southern Region			150.26	21.64			171.90
Kayamkulam			32.30				32.30
Sub total power purchase	9811	9467	969.96	78.31	1.77	1731.85	2781.99
Total	17119	16726	969.96	78.31	1.19	2033.40	3083.54

The total power purchase approved is 9811 MU with a cost of Rs.2781.99 Crore. The total cost of generation, power purchase and transmission cost allowed is Rs.3083.54crore for 2009-10.

The Commission notes that higher cost of generation and power purchase is due to low availability of hydro power. Considering the advantage of the storage in the reservoirs, it may be possible to have off-peak energy, which could be traded as has been done in the previous years. In the last few years, KSEB resorted to selling surplus by using hydro advantage. Hence, power shortage in 2008-09, and resultant short term purchase needs to be viewed in isolation.

However, in order to insulate the licensee from hydro risk, the Commission would resort to a comprehensive review of hydro energy availability in the month of December 2009, by then the rainfall position and the shortage/surpluses if any would be reasonably be established. Accordingly, **KSEB shall approach the Commission with all necessary details for the review and if necessary, a reasonable proposal for short term purchase in a situation of hydro failure or reduction in availability from CGS or short fall in meeting peak load.**

In the previous year the volatility of fuel prices have upset the approved ARR considerably. The Commission has allowed fuel surcharge and higher cost for excess consumption over the quota to set off the impact. However, the Commission is of the view that the licensee is to be insulated from such volatility in fuel prices. The high exposure to Liquid fuel stations is one of the features of Kerala System. KSEB and many stakeholders have also suggested to introduce fuel price adjustment formula. **Accordingly the Commission proposes to introduce fuel price adjustment formula from 2009-10 onwards. Draft regulation would be notified for comments soon. By doing this, the Commission has addressed the major risk faced by the Board.**

5.3 Interest and financing charges:

In the year 2007-08, Board has stated that as against the proposed borrowing of Rs.584 Crore actually no long term borrowing was resorted. The interest cost of Rs.458.61 crore projected for 2007-08 was fully admitted by the Commission, but the actual interest expenses was only Rs.352.77 Crore. Similarly, in 2008-09, the borrowing was revised to Rs.459.62 crore against the proposal of Rs.587.34 crore. The Board further

stated that it could fulfill the repayment obligations for the year 2008-09 even in a situation of financial strain due to failure of monsoon, owing to the deposits created earlier. The Board has claimed that it is the only power utility in the country which brought down the capital liabilities to less than one third within 4 years.

The Board estimates that the outstanding loans and bonds as on 1-4-2009 would be Rs.1500.31crore. It proposes to incur Rs.1377 crore as capital expenditure and repayment as Rs.227.65 crore in 2009-10. Considering the internal resources available, additional borrowing of Rs.764.87 Crore is proposed for 2009-10. The interest commitment for 2009-10 is estimated as Rs.188.45 crore as shown below.

Interest charges proposed for 2009-10

Sl. No.	Particulars	Rate of Interest (%)	Balance at the beginning of the year	Planned borrowing during the year	Planned redemption during the year	Balance out standing at the end of the year	Interest for the year
			(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)
I	Loans from Government	12	69.50	69.50	0.00	139.00	8.34
II	Loans from others secured						
	KSE Bond	11.50 - 13.00	41.80	0.00	20.90	20.90	4.64
	Non SLR Bonds	11.00	1.40	0.00	0.00	1.40	0.15
	REC	8.25-12.75	293.76	0.00	83.50	210.26	25.29
	REC OECF	16.00	2.74	0.00	2.74	0.00	0.43
	LIC	9.00	20.00	0.00	2.00	18.00	1.80
	PFC	6.00 - 10.50	53.45	0.00	15.34	38.11	4.28
	EDCP	6.80	16.68	0.00	16.68	0.00	0.00
	Subtotal		429.83	0.00	141.16	288.67	38.17
III	Loans from others unsecured						
	IDBI	9.50 - 13.50	3.67	0.00	3.24	0.43	0.76
	LIC	11.00	62.33	0.00	14.57	47.76	6.46
	REC	8.25-12.75	248.74	0.00	25.00	223.74	24.88
	Credit Lyonnais	5.95	22.77	0.00	22.77	0.00	0.98
	KPFC	6.75 -11.75	331.00	0.00	0.91	330.09	35.65
	STL from UBI	12	27.50	0.00	20.00	7.50	1.41
	Subtotal		696.01	0.00	86.49	609.52	70.14
	Additional borrowing 09-10	11.00	304.97	695.37	0.00	1000.34	71.80
	Grand Total		1500.31	764.87	227.65	2037.53	188.45

In addition to interest on loans, the Board has projected Interest on security deposit of consumers (Rs.50.50 Crore), Interest on working capital (Rs. 18.00Crore), Rebate to

consumers for prompt payment (Rs.5.50 Crore), Interest on provident fund balance (Rs.64.88 Crore), Cost of raising finance (Rs.1.00 Crore), Guarantee Commission (Rs.3.97 crore), Bank charges (Rs. 13 Crore) totaling to Rs. 106.36 Crore. The total interest and financing charges thus estimated to be Rs.345.31 Crore.

5.3.1. Deliberations in the Advisory Committee

Advisory Committee members did not make any comments on the interest charges proposed by the Board.

5.3.2. Objections from the Stakeholders

The objectors generally opined that reduction in cost achieved by the Board is a welcome sign. Shri. K. Gopalakrishnan mentioned that KSEB is collecting additional cash deposit from the consumers, which is not presented in the accounts. The Association argued that the Board does not require any working capital borrowing based on the figures filed by them. According to them, the Board is cash surplus, hence they objected to the working capital borrowing of the board to the tune of Rs.18 Crore. They have shown their claims as follows:

	(Rs. Crore)		
	2007-08	2008-09	2009-10
Current Assets (A)	3,502	2,899	3,338
Cash & Bank (B)	1,583	1,012	1,462
Non cash current Assets (C=A-B)	1,918	1,887	1,876
Current Liabilities (D)	3,812	4,602	5,488
Non cash net current assets (Non cash working capital requirement) (E= C-D)	(1,894)	(2,715)	(3,613)
Change in non cash working capital = working capital borrowing		(821)	(897)

They have requested to disallow the claim on interest on new loans for capital expenditure since no information was there for analysing the capital expenditure.

5.3.3. Analysis and decision of the Commission

The Board has claimed that the interest charges have been reduced substantially over the years from Rs.726.32 Crore to Rs.344.31 Crore in 2009-10. On this aspect, the Board deserves appreciation as the benefit of lower interest has been passed on to the consumers. *However, as mentioned in the previous Order, the Commission is of the view that lower interest cost needs to be viewed with caution, as it has long run*

implications. There are many reasons which could be attributed to reduction in interest costs. One of the reasons could be the netting off of loans from the Government, which was about Rs.436.78 Crore. There was a decrease of Rs.132.95 crore towards interest cost in 2006-07 when compared to 2005-06, which could be attributed to the writing off of loans. Further the actual borrowings were much less than what is projected in the ARR as shown below.

Borrowings proposed and actual (2004-05 to 2008-09)

Year	Borrowing (Rs. Crore)			
	Proposed in ARR	Revised	Actual	Actual as % of proposed
2004-05	800.0	800.0	582.2	73%
2005-06	1000.0	511.4	379.4	38%
2006-07	600.0	536.5	41.1	7%
2007-08	584.6	353.6	3.1	1%
2008-09	587.3	305.0		

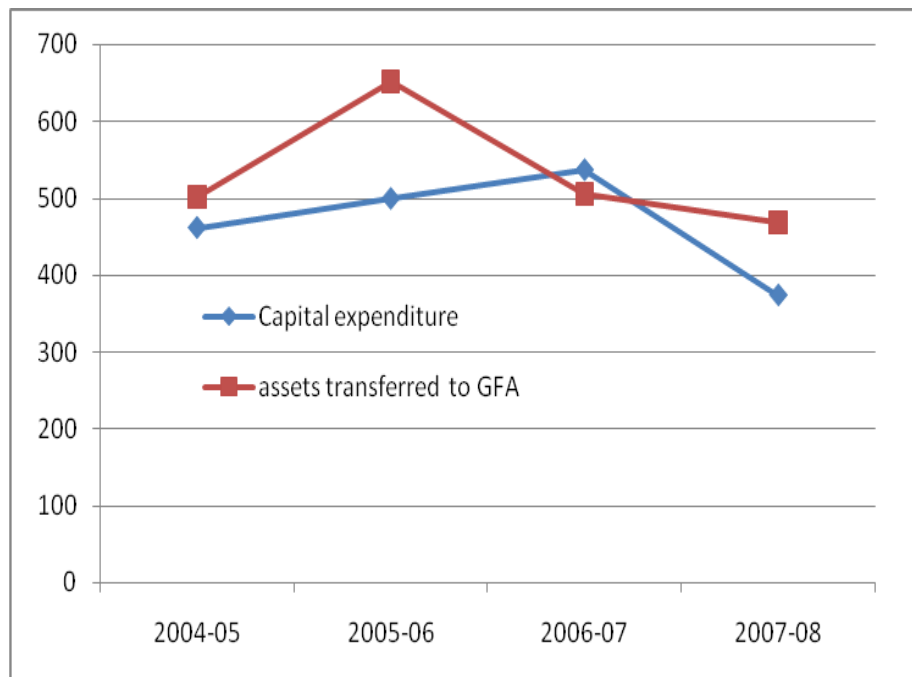
In fact the actual borrowing was nil in 2007-08 as Rs.3.1 Crore shown as borrowing is on account of Foreign Exchange Rate variation.

As mentioned elsewhere, the reduction in borrowing was mainly at the cost of reduction in capital investment. As shown in chapter 4, capital expenditure over the years have been tardy and much below the targets proposed. The Commission feels that for a capital intensive industry such as electricity business, such signals are not desirable.

		(Rs. Crore)					
		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
1	Total capital expenses	454.59	809.09	461.92	499.93	537.45	373.71
2	IDC + Expenses capitalised	219.23	187.16	104.92	92.11	78.32	77.41
3	Contribution for cost of capital Assets	155.88	185.26	201.23	265.83	216.14	186.47
	Internal funds/net						
4 = 1-(2+3)	borrowing	79.48	436.67	155.77	141.99	242.99	109.83
	(2+3) as % of 1	83%	46%	66%	72%	55%	71%

Further, as shown above, no long term borrowings were resorted and major share of the total capital expenses are funded through contribution and expenses capitalization. Further, the trend shown in the following graph that both capital investment and addition to Gross block having reduced over the years is not certainly a good sign for a capital

intensive business as that of the Board. The lower level of capital expenditure has been reflected in the increased cash position in the past few years.



In the past, the Commission used to accept the projections of the Board on the proposed borrowing and allowed the interest cost on the same. However, this could cause problems in triuing up as the Commission cannot permit to retain the entire saving on interest cost with the Board. As some objectors have pointed out, the interest cost saving achieved by the Board was mainly on account of reduced borrowing than the proposed levels, thereby leading to a situation of excess gain over what actually deserve. Surely efforts of the Board is to be commented on achieving the financial discipline on borrowing, the Commission at the same time cannot ignore the fact that interests of the consumers have to be protected and hence to see whether the borrowing level proposed by the Board are actually required or not. The Board has proposed Rs.587.3 Crore as additional borrowing in the ARR for 2008-09. The Commission in the Order for 2008-09, based on the actual borrowing in the previous years, capital expenditure, and the cash surplus available concluded that 50% of borrowing proposed by the Board ie., Rs.294 Crore would only be required for 2008-09. In actual terms, for 2007-08 there was no borrowing, and in 2008-09, the borrowing was revised to Rs.459.62 from Rs.587.34 Crore in the present filing.

As part of the additional details sought by the Commission, the Board has provided the details of borrowing plan upto 31-3-2009. From the details provided, the Board has shown the additional borrowing of only Rs.85.15 crore for 2008-09 as shown in the table below. Though the Board has proposed Rs.69.5 Crore from the Government in 2008-09, this was not availed so far or included in the plan for January 09 to March 09.

Debt servicing and capital liability as on 1-1-2009 (Rs. Crore)					
Sources	OB as on 1-4-2008	Borrowing (April to Dec.08)	OB as on 1-1-2009	Borrowing (Jan to March,09)	Closing Balance as on 31-3-2009
IDBI	15.37		5.85		3.67
SIDBI	0.32		0.05		.
LIC	99.94		87.42		82.33
PFC	69.49		54.57		53.45
Non SLR Bond	1.40				1.40
Public Bond	62.70		41.80		41.80
Central bank of India	60.00		15.00		0.00
REC	567.84	85.15	620.03		541.99
REC –RGGVY	0.51		0.51		0.51
REC – OECF	5.48		5.48		2.74
EDCK	4.53		0.02		0.02
EDCP	33.29		14.92		14.92
CALYON	46.84		21.74		21.74
KPFC	841.50		331.53		331.00
Short Term - Union bank of India	47.50		32.50		27.50
Total	1856.70	85.15	1231.42		1123.08

Considering the planned redemption proposed to the tune of Rs.227.65 crore and depreciation and other non-cash expenses available to the Board, the Commission is of the view that the borrowing proposed to the tune of Rs.764.87 Crore may not be required for 2009-10. From the experience of previous years, the Commission could not judge reasonably the actual amount of capital investment to be incurred in 2009-10 over the projection of Rs.1377 Crore. Further, the Commission has allowed depreciation in the revised norms of CERC, which also provides additional cash to the Board. Hence, the Commission would stick on to the stand taken in the previous order that 50% of the borrowing (Rs.382.44 Crore) would only be needed in the year 2009-10. Hence, the

interest for the additional borrowing would be limited to Rs.30.40 Crore as against Rs.71.80 Crore proposed by the Board.

The Board has incorporated the impact of netting off of Government loans while estimating the interest and financing charges, though the Commission in its previous Order mentioned that it is not in a position to endorse the proposal of netting off in the present form. Similar stand has been taken by the Comptroller and Auditor General of India. In the Audit Report of the Comptroller and Auditor General of India on the Accounts of KSEB for the year ended 31-3-2007 has commended as follows:

As per Note no. 12(iii) (b) an amount of Rs.2483.05 crore due to the Government of Kerala by way of duty payable, guarantee commission, state Government loan outstanding and interest on state government as on 31-3-2006 were netted off against Rs.4485.35 Crore booked as receivable from the Government against subsidy for 3% rate of return and subsidy for allowing pre-1992 tariff, based on the Board Order no. 1421/2007 (Annual Accounts/Netting off/2006-07 dated 18-6-2007).

The fact that the netting of dues to Government of Kerala require the approval of the Full Board and that of the Council of Ministers of Government of Kerala had neither been obtained nor disclosed adequately in the notes. Therefore the adjustment/netting off the Government dues/dues to government to the extent of Rs.2483.05 crore lacked proper authority.

Considering the above, the Commission also allowed interest on government loans notionally 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.

Since, no conclusive decision was communicated by the Government or the Board on the netting off proposal, the Commission sticks to the earlier stand and notionally allows Rs.50.2 crore as interest towards Government loans for the year 2009-10 also. The restructuring and corporatization of Board is in progress as per Section 131 of the Act. The Commission expects that while preparing the opening balance sheet of the new entities the matter will be finalized by protecting the interests of the consumers. Till then the Commission is of the view that the practice of notionally allowing the interest on Government borrowing be continued for 2009-10.

5.3.4 Other interest charges

The Board proposed Rs.50.50 Crore on interest on security deposits as it expects that the outstanding as on 1-4-2008 would be Rs. 841.73 Crore. The Commission allows the same. Similarly, the Board estimated Rs.5.50 towards rebate for advance payment, Rs.1 Crore towards Cost of raising finance, Rs.13 crore towards Bank charges, Rs.3.97 Crore towards Guarantee Commission and Rs. 64.68 Crore for interest on outstanding on provident fund balance. **The Commission allows these estimates and clarifies that these payments shall only be allowed on actual basis in the truing up as the Board has not much control on most of these items.** The interest on provident fund balance is shown as Rs.64.68 crore. However, Commission notes that, much enhanced provision kept under this head may be to account for Arrears on wages credited to the PF, which has to be kept till August, 2008 only. In such situation, interest on PF should have been lower than that estimated by the Board. In the absence of details, the Commission allows the projection of the Board on this account.

The Board has proposed Rs.18.00 crore for 2009-10 towards interest on working capital as against the actual of Rs.2.80 for the year 2007-08. In the ARR for 2008-09, the Board has proposed Rs.5.31 Crore towards this head. However, considering the higher working capital requirements during 2008-09 on account of excess procurement of power from other sources, the interest cost was revised to Rs.16.6 Crore. As against the unprecedented year of 2008-09, the Board projected still higher provision for 2009-10. However, consumers have objected to this. The Association has stated that, the Board does not need any working capital as such since there is surplus cash. Hence they have argued that the interest on working capital is not to be allowed. The Commission finds merit in the argument of the Association. The change in cash position over previous years is as follows:

Closing Cash balance

Year	Cash & bank balance Rs. Crore	Change over previous year Rs.Crore
2004-05	319.2	
2005-06	345.3	26.1
2006-07	724.2	378.9
2007-08	1583.2	859.0
2008-09	1012.1	

The Commission notes that the situation in 2008-09 was unprecedented and the actual working capital requirements could have been higher than the anticipated. This situation shall not be cited as a reason for claiming interest for the year 2009-10 also. Considering the arguments proposed by the stakeholders and the actuals in the previous years, the Commission is of the view that interest on working capital projected by the Board is on the higher side and allows the same provision as that proposed in the year 2008-09 for 2009-10 also.

Based on the reasons cited in the previous paras, the interest charges for 2009-10 is allowed as shown below on a provisional basis due to the ambiguity in the netting off proposal.

Interest Charges allowed for 2009-10

Particulars	Proposed by the Board	Allowed by the Commission
	(Rs. Crore)	(Rs. Crore)
Interest for existing loans	108.31	108.31
Interest for additional borrowing (2008-09 & 2009-10)	71.80	30.40
Interest on Government loans	8.34	50.23
Interest on security deposits	50.50	50.50
Interest on working capital	18.00	5.31
Rebate for timely payment	5.50	5.50
Interest on PF	64.88	64.88
Other interest	0.01	0.01
Cost of raising finance	1.00	1.00
Guarantee Commission	3.97	3.97
Bank Charges	13.00	13.00
Total	345.31	333.11

5.4. Depreciation

The Board has estimated the depreciation for 2009-10 as Rs.489.41 Crore based on the norms given in the Annual Account Rules as follows:

Depreciation proposed by the Board

Details of Assets	2007-08 (Provisional) (Rs. Crore)	2008-09 (Revised) (Rs. Crore)		2009-10 (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	143.18	17.24	160.42	18.53	178.96
Hydraulic Works	209.14	21.82	230.96	23.17	254.13
Other Civil Works	42.83	8.24	51.07	9.33	60.40
Plant & Machinery	1446.06	187.25	1633.31	199.33	1832.64
Cable Network etc	1615.53	205.58	1821.11	234.38	2055.50
Vehicles	10.50	0.12	10.62	0.12	10.74
Furniture and Fixtures	9.51	0.73	10.24	0.77	11.01
Office Equipments	12.60	3.47	16.07	3.77	19.84
Total	3489.35	444.46	3933.81	489.41	4423.22

The Board has stated that, it is mandatory on its part to keep the accounts as per the 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:

Shri. VKC Mammed Koya, stressed that depreciation is to be allowed only based on CERC guidelines. Shri. George Thomas also suggested that depreciation shall be on CERC norms only.

5.4.2 Objections of Stakeholders

The Association argued that the depreciation should be allowed as has been done in the previous years based on CERC norms. According to their estimates, the depreciation would be only Rs.312 Crore as against the estimates of the Board which is about Rs.177.41 crore more. They also demanded that depreciation should not be claimed on the portion on the assets acquired using consumer contribution, which is against natural justice.

HNL employees Association stated that depreciation should not be allowed. Cominco Binani Employees Union mentioned that KSEB is showing depreciation as per the provisions of the repealed Act which should not be accepted. Standing Council of

Trade Unions have also given similar views. M/s Binani zinc mentioned that depreciation should be allowed as per the norms allowed in the previous years.

5.4.3. Analysis and decision of the Commission

The Commission in the previous orders has taken a stand that depreciation shall be allowed as per the provisions under the Electricity Act, 2003, which was endorsed by the State Advisory Committee and stakeholders in general.

However, the Board has consistently taken a stand that it has to follow the Electricity Supply and Annual Accounts Rules (ESAAR), 1985, which was saved under Section 185(2) of the Act as in line with 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. The stand taken by the Board has been commented by the C&AG in the Audit Report given for the year 2006-07. The C&AG has noted that the depreciation provision for 2006-07 has been overstated to the tune of Rs.175.31 Crore on account of non-provision of depreciation at the rates fixed by CERC and the Regulations issued by KSERC, since it states that depreciation fixed as per the regulations shall be applicable for the purpose of tariff as well as accounting. The comment of C&AG has to be seriously viewed as it rules out the contention of the Board and shows that Board is not maintaining the accounts as per the laws in force. Further, as per the transfer scheme issued vide Government Order No. (Ms)N.37/2008/PD dated 25-9-2008, the Assets and Liabilities of the Board have been taken over by the Government, which raises the issue of applicability of ESAAR, 1985 to the assets vested with the Government.

The Commission has been following the CERC norms for allowing depreciation. CERC recently issued Terms and Condition of Tariff Regulations applicable for the tariff period 2009-14 for Generating Companies and Transmission utilities. In the said regulations, CERC has made significant changes in the manner of calculation of Depreciation. In the said regulations, the CERC has considered 12 year repayment period for long term loans and adjusted the depreciation for the loan component in such a way that cash flow is available to meet the repayment obligation. Accordingly the actual depreciation would increase. The provision under the Regulation is as follows:

17. Depreciation. (1) *The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.*

(2) *The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.*

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) *Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*

(4) *Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:*

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) *In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2009 from the gross depreciable value of the assets.*

(6) *Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.*

The Commission has sought clarification from the Board on the estimation of depreciation, and the Board has provided a working on depreciation at Rs.477 Crore based on the new norms. In the letter dated 23-3-2009, the Board has requested to

allow depreciation rates as per new CERC norms if the Commission is not allowing depreciation as per Gol norms which are being followed by the Board. However, the estimation given by the Board was not entirely based on the revised CERC norms. The Board has applied the rates provided in the Appendix III of the regulations of CERC on the estimates of GFA as on 1-4-2009 without considering the vintage of assets as provided in the revised regulation. Though the Commission has directed the Board to revise the estimates based on new norms, the Board did not do so. In the absence of details on vintage of assets, the Commission is finding it difficult to allow depreciation on the revised norms. However, as a matter of consistency, the Commission decides to allow the depreciation on the revised CERC norms. Since the estimation provided by the Board is not strictly in line with the revised norms, in the absence of any other better estimates, the Commission provisionally allows the estimates of Rs. 477.90 crore by the Board, on the condition that in the truing up, the Board has to update the accounts and provide depreciation calculated strictly in accordance with the revised norms. In its absence, the Commission would resort to earlier norms.

Depreciation allowed for 2009-10

Details of Assets	Approved Rate of Depreciation (%)	Gross block as on 1-4-2009	Depreciation for 2009-10
	(%)	(Rs. Crore)	(Rs. Crore)
Land & Rights	0.00%	262.37	0.00
Buildings	3.34%	527.30	17.61
Hydraulic Works	5.28%	947.72	50.04
Other Civil Works	3.34%	312.67	10.44
Plant & Machinery	5.28%	3488.28	184.18
Cable Network etc	5.28%	4002.78	211.35
Vehicles	9.50%	11.91	1.13
Furniture and Fixtures	6.33%	14.09	0.89
Office Equipments	6.33%	35.55	2.25
Total		9602.67	477.90

5.5. Employee cost:

The projected employee cost for 2009-10 is Rs.1069.96 Crore, which is inclusive of the pension liabilities. Pension liabilities for 2009-10 are projected as Rs.419.26 Crore, where as the revised estimates for 2008-09 is Rs. 659.82 crore. The increase in terminal benefits were on account of anticipated commitment on account of pension revision. It is also assumed that 90% of the employees would encash their earned leave. The Board also stated that it is difficult to undertake works relating to new connections, line extensions, voltage improvement, system improvement works, energy audit related works substation construction etc., due to shortage of staff. The Board has taken steps for filling up vacancies and provision for the same is included in 2009-10.

Employee Cost proposed by the Board

Sl. No.	Particulars	2007-08	2008-09		2009-10
		Actual (Rs. Crore)	Projected (Rs. Crore)	Estimated (Rs. Crore)	Anticipated / Budgeted (Rs. Crore)
1	Salaries	348.41	497.12	367.75	387.86
2	Overtime/Holiday Wages	0.06	0.90	0.15	0.20
3	DA	97.90	159.08	139.75	187.39
4	Other Allowances	24.84	25.00	25.00	27.00
5	Bonus	2.86	2.75	3.16	3.30
6	Sub Total of 1 to 5	474.07	684.85	535.81	605.75
7	Medical Expenses Reimbursement	2.87	3.20	3.25	3.40
8	Earned Leave Encashment	36.65	36.20	38.00	40.00
9	Payment under Workmen's Compensation	0.59	0.62	0.65	0.70
10	Leave Salary & Pension Contribution	0.15	0.07	0.18	0.20
11	Sub Total 7 to 11	40.26	40.09	42.08	44.30
12	Staff Welfare Expenses	0.55	0.32	0.58	0.65
13	Terminal Benefits	390.00	411.60	659.82	419.26
14	Sub-Total of 13 to 14	390.55	411.92	660.40	419.91
15	Grand Total	904.88	1136.86	1238.29	1069.96

5.5.1. Deliberations in the Advisory Committee:

Shri. NT Nair stated that with the introduction of automation and computerization, there should be substantial reduction in employee costs. Shri Ravindran Nair stated that employee costs proposed by KSEB are comparable to other utilities. According to Shri. George Thomas, at least 40% reduction in employee cost is possible. He also suggested to create a pension fund for meeting liabilities of retired employees.

5.5.2. Objections of stakeholders:

Cominco Binani Employees union stated that the increase in employee cost should be met out of increase in productivity. Employee cost in KSEB is only increasing continuously, which is passed on to the consumers. They have also supported the contentions by showing the example of Gujarat, Andhra Pradesh, Karnataka, and Tamil Nadu, where employee costs are at manageable levels. Kerala News Print Employees Union, Hindustan Paper Corporation Employees Association have also expressed the same opinion. Standing council of Trade Unions opined that KSEB had not made any effort to reduce the employee cost. Binani Zinc Employees Organisation stated that the Board has not implemented suggestion of the Commission such as pension scheme for new employees, out sourcing, linking wages to productivity etc., for reducing the employee cost. The Association noted that in all the orders, the Commission had stressed to improve the O&M practices, but the Board has not given any proposal for implementing such directions. The Board has stated that employee costs are projected in line with wage agreement and government policy, which are in vogue for last several decades. The Association stated that, Board wanted to do all these just because these were in vogue for years. The argument of the Board that requirement of increasing manpower to improve operating efficiency and timely service is another indication of anachronistic thinking and the way of functioning of the Board. As pointed out by the trade unions in other industries, improvement in efficiency and productivity of employees would obviate the need for additional manpower to meet the service obligations. The Board has proposed 12.5% increase in employee costs where as the weighted average of inflation is only 7%, which works out to about Rs.618.34 crore for salary than Rs.650.10 Crore projected by the Board. The objectors also demanded that the Board should provide detailed breakup of the grade wise salary being paid to its employees currently and the details of pensioners of the Board. The Association also suggested that considering the high proportion of pension liabilities and imminent corporatization of the Board, the pension liabilities may be funded with a corpus using subsidy receivable (Rs.2000 Crore) and KWA dues (Rs.750 Crore). M/s Binani Zinc Limited mentioned that employee cost is very high in KSEB compared to other states, which is about Ps80/kWh in comparison to 25 to 59 paise/kWh in other States. Considering the share of pension to the tune of 36%, the Board should look for alternative methods for funding pension liabilities.

5.5.3 Analysis and decision of the Commission

As in the previous years, 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 employee unions representing different industry organizations argued that increase in employee costs should be funded through productivity improvements. The Commission always considered increase in employee cost as one major area of concern. The Commission has reminded the Board on many an occasion to provide a constructive action plan for reducing and optimizing the employee cost and pension liabilities. The Board has put up a new argument in the present filing on increase in employee liabilities. According to the Board the increase in employee cost in the Board is due to the difference in booking of employee costs in the books of accounts. In utilities where employee cost is low, they book cost of employees associated with operation and maintenance of the plant, machinery and distribution directly under employee cost and employee costs of capital works in generation transmission and distribution works are accounted separately and booked under capital cost. Though such arguments are placed there were no documents placed by the Board to support the justification.

The Board vide letter dated 26-3-2009, stated that KSEB is taking various steps to improve the productivity of the employees by fixing responsibilities. The Board has issued circular on the guidelines for promotion to the post of managerial cadres. Further the task of work study on various functional areas has been entrusted to M/s Centre for Management Development.

The Board has projected the employee costs including terminal liabilities as Rs.1069.96 Crore. It is about Rs.192 Crore higher than the actual for 2007-08. The Board has stated that the major reason for increase in employee cost is on account of pension liabilities. However, no concrete action has been taken by the Board to correct the issue. Further, it can also be noted that the employee cost is not entirely masked by the increase in pension liabilities. The data shows that rate of increase in employee costs are much higher than the pension liabilities. Hence the two factors; increase in employee costs and the pension liabilities have pushed up the cost significantly over the years.

Salary and pension liabilities from 2002-03 to 2009-10

Year	Salary & benefits to serving employees	Pension & other benefits to retired employees	Total employee costs	(%) of pension in total employee cost
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	
(1)	(2)	(3)	(4)= (2)+(3)	(5)= (3)/(4)
2002-03	356.38	314.45	670.83	46.87
2003-04	397.53	390.78	788.31	49.57
2004-05	446.73	342.91	789.64	43.43
2005-06	487.65	374.88	862.53	43.46
2006-07	542.14	355.95	898.09	39.63
2007-08	514.88	390.00	904.88	43.1
2008-09 (Est)	577.89	660.40	1238.29	53.33
2009-10 (proj)	650.05	419.91	1069.96	39.25
Rate of increase	9.0%	4.2%	6.9%	

As shown in the above table the rate of increase in employee cost for serving employees have grown at a rate of 9% per year whereas the pension liabilities have grown at about 4.2% per year. The overall increase in employee cost is about 7% per year.

The Board has projected about 13% increase in salary and DA for 2009-10 over the revised estimates of 2008-09. Further it is 29% higher than 2007-08 actuals. Hence the projections are higher than the reasonable levels. About 8% increase is proposed for overtime and other allowances over the 2008-09 revised estimates. The terminal liabilities in 2009-10 are only Rs.29 crore over 2007-08. However, such comparisons are meaningless unless the impact shown under the prior period charges are considered.

As stated above, these estimates are comparatively higher, it is becoming more difficult to fund the present escalation of employee costs from the revenue from tariffs. The Board has to take stern 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 time and again have suggested to explore various options. Unless the management of KSEB and the Government take positive steps to bring down the employee cost at par with the utilities of other states, the reduction in employee costs would remain a dream. With these observations, the Commission approves the projections of KSEB subject to the condition that during the triuing up exercise only actual expenses would be allowed.

5.6. A&G Expenses

Administration and General expenses projected by the Board for 2009-10 is Rs.155.21 Crore against Rs.125.35 Crore for 2007-08 (actual). The Board has stated that significant portion of the A&G expenses is the Section 3(1) duty payable to Government of Kerala, which is estimated as Rs.79.86 Crore. Since, the Commission is not allowing the duty payable as per Section 3(1) in the ARR, the Board has taken up the matter with the Government. The Board claimed that vide letter No.4695/c1/08/PD dated 15-7-2008 Government has issued a direction to the Commission to 'book section 3(1) duty as per KED Act, 1963 as revenue expenditure under A&G expenses of the Board'. The actual A&G expenses for 2007-08 is Rs. 47.81 Crore, and for 2009-10 it is projected at Rs.79.86 crore, which is about 57.60% more than 2007-08. 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. To cope up with the expansion of activities, new offices are opened and hence rent and expenses towards additional vehicles and other infrastructure to the new offices would increase the A&G expenses. The Board has also stated that for giving connections to the downtrodden sections of the society, sizable increase in procurement of materials for the execution of schemes are required, which would increase the charges for freight, travelling and purchase related administrative activities. The Board has stated that the estimate is only 9% over the estimates of 2008-09. The details are given below.

Sl. No.	Particulars	2007-08	2008-09	2009-10
		Provisional (Rs. Crore)	Revised (Rs. Crore)	Estimate (Rs. Crore)
1	Rents, rates and taxes	3.45	4.00	4.60
2	Insurance	0.60	0.75	0.85
3	Telephone/telex charges, etc.	3.60	4.17	4.57
4	Internet and related charges	0.01	0.06	0.07
5	Legal charges	2.42	9.18	9.98
6	Audit fees	2.27	2.30	2.65
7	Consultancy charges	0.06	1.18	0.21
8	Other Professional charges	0.40	0.44	0.51
9	Conveyance and vehicle hire charges	11.21	14.81	16.46
10	Sub Total (Total of 1 to 9)	24.01	36.89	39.90
11	OTHER EXPENSES			
	a) Fees and subscriptions	0.48	0.52	0.60
	d) Printing & stationary	4.20	4.60	5.28
	e) Advertisements	0.92	1.28	1.47
	f) Contributions/donations	0.78	1.50	1.73
	g) Electricity charges	3.38	3.70	4.25
	h) Water charges	0.11	0.15	0.17

Sl. No.	Particulars	2007-08	2008-09	2009-10
		Provisional (Rs. Crore)	Revised (Rs. Crore)	Estimate (Rs. Crore)
	i) Entertainment	0.18	0.28	0.32
	j) Miscellaneous expenses	6.20	8.63	9.93
12	Total of Other Expenses	16.25	20.66	23.74
13	Freight	5.30	7.10	8.17
14	Other purchase related expenses	2.25	3.10	3.54
	Total	47.81	67.75	75.35
15	Ele. Duty u/s 3(l), KED Act	77.54	72.59	79.86
	GRAND TOTAL	125.35	140.34	155.21

5.6.1. Deliberations in the Advisory Committee:

Shri. George Thomas stated that whatever is proposed by the Board need not be allowed since the A&G expenses is a controllable item.

5.6.2 Objections of stakeholders:

HNL employees Association has stated that electricity duty shall not be allowed as part of A&G expenses. Cominco Binani Employees Union argued that electricity duty, donations and miscellaneous expenses to the tune of Rs.9.93 crore should be disallowed. Kerala News Print Employees Union and Hindustan Paper corporation Employees Association have also expressed the same opinion. The Association also suggested that electricity duty payable under section 3 of KED Act should not be allowed to the Board. Further, the donations and miscellaneous expenses projected to the tune of Rs. 1.73 Crore and Rs.9.93 Crore should be disallowed.

5.6.3. Analysis and Decision of the Commission

The A&G expense is one of the controllable items of cost. The revised estimates of A&G expense excluding duty for 2008-09 is Rs.67.75 Crore. The Commission has allowed Rs.61.99 crore for 2008-09. Of the A&G expenses projected, 13.2% is towards legal expenses, 22% is for conveyance and 13% for miscellaneous expenses. Many stakeholders have opposed to the charging of Section 3(1) duty under miscellaneous expenses. As has been done in the previous order, the Commission is not in a position to allow the section 3(1) duty to be passed on to the tariff and charged to the consumers in violation of the provisions of the KED Act, 1963. Further, objectors have expressed concern over the miscellaneous charges and provision for giving donations (Rs.1.73

Crore). This issue has been raised in several hearings. However, the Board did not explain the items under these heads and the requirement of donations. Further it can be noted that under donations/contributions the actual was Rs.0.78 Crore in 2007-08, which is now proposed at Rs.1.73 crore for 2009-10, an increase of 122% over two years. The Commission finds merit in the arguments of the stakeholders that such huge provision and unreasonable increase is not required under the head donations considering the present financial position of the Board and hence the Commission decided to cap it at a level of Rs.1.00 Crore, which is still about 22% higher than the level in 2007-08. The Board shall strive to control the expense under this head always below this ceiling, which would alone be allowed in the tariff.

The Board in its filing has stated that Government has given directions to the Commission on allowing duty under section 3(1) of KED Act as revenue expenses and Depreciation under Gol norms by citing a letter from the Government No.4695/c1/08/PD dated 15-7-2008. In the said letter Government requested the Commission to issue necessary orders on the above items. As per the provisions of the Act, direction from the Government shall be under section 108 and for the public interest. The letter from the Government is apparently on the request of the Board vide No KSEB/TRAC/TF-06/379 dated 9-6-08 from the Chairman of KSEB, which under no circumstances could be treated as directions as per the Act. The Commission has given reply to the Government explaining the reason for not allowing the depreciation and duty to be passed on to the consumer tariff.

Another major item under A&G expenses is legal expenses. The provision of Rs.9.98Crore in 2009-10 is more than 300% compared to 2007-08. Such higher provision has to be judged against winning cases and contributing value to the Board. Increase in legal expenses is on account of the litigations with the consumers in various courts. The Commission is of the view that since the formation of CGRF and Ombudsman, the cost of litigations should come down and the Board should increasingly resort to these institutions for settling the grievances of the consumers than dragging them to the court. Hence, the Commission put a cap on legal expenses at a level of Rs.5 crore, which is twice the actual for 2007-08. Any increase under this head over the approved level has to be properly justified in the truing up process, for allowing to be passed on to the tariff. Further, in order to give a signal to the Board on the need for controlling the A&G expense, the Commission is of the view that a 10% increase over the approved expenses for 2008-09 for the other heads under A&G expenses be

allowed for the year 2009-10. Thus the allowable expenses under this head would be Rs.64.22 Crore. Accordingly, the A&G expenses approved to be passed on to the tariff are as follows.

A&G Expenses approved for 2009-10

Particulars	2007-08	2008-09	2009-10	2009-10
	Provisional	Revised	Proposed	Approved
	Rs. Cr	Rs. Cr	Rs. Cr	Rs. Cr
Rents, rates and taxes	3.45	4.00	4.60	4.46
Insurance	0.60	0.75	0.85	1.21
Telephone/telex charges, etc.	3.60	4.17	4.57	4.37
Internet and related charges	0.01	0.06	0.07	0.07
Legal charges	2.42	9.18	9.98	5.00
Audit fees	2.27	2.30	2.65	2.15
Consultancy charges	0.06	1.18	0.21	0.20
Other Professional charges	0.40	0.44	0.51	0.42
Conveyance and vehicle hire charges	11.21	14.81	16.46	15.74
Sub Total (Total of 1 to 9)	24.01	36.89	39.90	33.60
OTHER EXPENSES				
a) Fees and subscriptions	0.48	0.52	0.60	0.29
d) Printing & stationary	4.20	4.60	5.28	4.33
e) Advertisements	0.92	1.28	1.47	0.75
f) Contributions/donations	0.78	1.50	1.73	1.00
g) Electricity charges	3.38	3.70	4.25	3.74
h) Water charges	0.11	0.15	0.17	0.17
i) Entertainment	0.18	0.28	0.32	0.31
j) Miscellaneous expenses	6.20	8.63	9.93	8.84
Total of Other Expenses	16.25	20.66	23.74	19.43
Freight	5.30	7.10	8.17	7.81
Other purchase related expenses	2.25	3.10	3.54	3.39
Total	47.81	67.75	75.35	64.22
Ele. Duty u/s 3(I), KED Act	77.54	72.59	79.86	0.00
GRAND TOTAL	125.35	140.34	155.21	64.22

5.7. Repair and maintenance Expenses:

For 2007-08 the approved R&M expenses was Rs.101.47 Crore whereas the actual expenses was Rs.116.26 Crore. In the present filing, for 2008-09, the Board has revised the estimate of R&M expenses to Rs.132.57 Crore. The projected expenses for 2009-10 is Rs.152.74 Crore. Of this, Rs.68.66 Crore was for consumption of stores, fuel etc., and the balance is for other expenses. In the ARR filing for 2008-09, 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. However, for 2009-10, the projections were made based on the 2008-09 estimates.

Repair and Maintenance Expenses proposed for 2009-10

Sl. No.	Particulars	2007-08	2008-09			2009-10		
		Prov. (Rs. Crore)	ARR (Rs. Crore)	KSERC (Rs. crore)	Revised (Rs. crore)	Projection		
						Consumption of stores, fuel etc. (Rs. crore)	Other Expenses (Rs. crore)	Total (Rs. crore)
1	Plant & Machinery	29.20	29.92	29.92	32.30	15.98	20.95	36.93
2	Buildings	3.16	4.35	4.35	4.30	2.32	2.69	5.01
3	Other Civil works	3.94	5.97	5.97	5.00	2.25	3.28	5.53
4	Hydraulic works	1.23	3.17	3.17	3.17	1.73	1.89	3.62
5	Lines, Cable networks	73.68	82.05	82.05	82.05	43.50	51.62	95.12
6	Vehicles	4.57	5.17	5.17	5.17	2.62	3.30	5.92
7	Furniture & fixtures	0.08	0.07	0.07	0.09	0.04	0.06	0.10
8	Office equipment	0.40	0.35	0.35	0.44	0.22	0.29	0.51
	Total	116.26	131.05	131.05	132.57	68.66	84.08	152.74

The projected expense is 15.2% above the revised estimate for 2008-09 and it works out to 1.64% of GFA.

R&M Expenses as percentage of GFA

Details of Assets	2007-08			2008-09			2009-10		
	GFA at the beginning of the year	R&M (Rs. Cr) (Actual)	%	GFA at the beginning of the year	R&M (Rs. Cr) (Actual)	%	GFA at the beginning of the year	R&M (Rs. Cr) (Actual)	%
	(Rs. Cr)			(Rs. Cr)			(Rs. Cr)		
Buildings	466.61	3.16	0.68	487.09	4.35	0.89	527.3	5.01	0.95
Hydraulic Works	856.46	1.23	0.14	886.94	3.17	0.36	947.72	3.62	0.38
Other Civil Works	252.23	3.94	1.56	272.94	5	1.83	312.67	5.53	1.77
Plant and Machinery	3138.47	29.2	0.93	3256.53	32.3	0.99	3488.28	36.93	1.06
Lines, Cable Network etc.	3193.89	73.68	2.31	3466.86	82.05	2.37	4002.78	95.12	2.38
Vehicles	11.89	4.57	38.44	11.9	5.17	43.45	11.91	5.92	49.71
Furniture and Fixtures	12.68	0.08	0.63	13.17	0.09	0.68	14.08	0.1	0.71
Office Equipments	30.82	0.4	1.30	32.43	0.44	1.36	35.55	0.51	1.43
Total	7963.09	116.26	1.46	8427.87	132.57	1.57	9340.3	152.74	1.64

5.7.1. Deliberations in the Advisory Committee

Shri. Sood and Shri. Ravindran Nair suggested that repair and maintenance expenses should be allowed which is required for maintaining quality of supply.

5.7.2. Analysis and decision of the Commission

The Commission on several occasions had 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. The Board has projected about 15% increase over the revised estimates of 2008-09 and about 31.4% over the actual of 2007-08. As mentioned earlier, the increased provision under hydraulic works, plant and machinery, and other civil works for 2008-09 was allowed by the Commission considering the accident at Panniyar as requested by the Board. However, for 2009-10, projections have been made over 2008-09 and hence it could be higher than normal. Though it is an increased provision, the Commission allows the R&M as projected by the Board considering the urgent need of R&M works necessary in the system. **However, the higher provision is allowed on the condition that Board has to provide detailed quantified assessment showing the function wise R&M works necessary and plan for carrying out the same, within one month of this order. In the absence of it, the Commission would allow only 10% compounded increase over the actual expenses in 2007-08 (ie., Rs.140.36 Crore based on provisional accounts) during the truing up process.**

5.8. Other Expenses

The other expenses include prior period expenses and other debits. The Board has stated that, as per commercial accounting principles it 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. As against

Rs.72.88 Crore projected towards net prior period charges in 2007-08, the actual turned out to be Rs.60.70 Crore as net income. The revised estimate for 2008-09 is Rs.35.10 Crore towards net prior charges. For the year 2009-10, the Board has provided Rs.27.30 crore as net prior period charges.

Prior Period Expenses proposed by the Board

Particulars	2007-08	2008-09		2009-10
	Actual Rs. Crore	ARR Rs. Crore	Revised Rs. Crore	Estimate Rs. Crore
I Income relating to previous Year				
1. Receipt from consumers	31.89	24.25	26.50	30.00
2. Excess provision for Depreciation in prior	0.00	0.00	0.00	0.00
3. Excess interest & Finance charges	9.72	3.00	3.00	3.50
4. Other excess provision	0.03	35.00	40.00	45.00
5. Other income	44.24	55.00	55.00	60.00
Total	85.88	117.45	124.50	138.50
II Expenditure relating to previous years				
1. Short provision for purchase	22.27	94.18	95.00	100.00
2. Fuel related expenses	0.00	1.17	1.20	1.30
3. Operating expenses	0.22	2.36	2.40	2.50
4. Employee cost	0.00	50.00	50.00	50.00
5. Depreciation under provided in prior period	0.00	0.00	0.00	0.00
6. Interest & Finance charges	0.52	1.00	1.00	1.00
7. Other charges	2.12	10.00	10.00	11.00
Total	25.12	305.30	159.60	166.80
Net prior period credit/charges(I-II)	60.76	-41.25	-35.10	-27.30

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:

Other debits proposed by the Board for 2009-10

Sl. No.	Particulars	Previous Year*	Current Year**	Ensuing year**
		2007-08 (Rs.Crore)	2008-09 (Rs. Crore)	2009-10 (Rs. Crore)
1	Research and Development Expenses	0.32	0.35	0.40
2	Provision for Bad and Doubtful debts	529.80	0.65	0.70
3	Miscellaneous Losses and write-offs	402.15	402.50	403.00
	Total	932.27	403.50	404.10

*Actuals; ** Estimates

For the year 2007-08, the Board had provided Rs.932.27 Crore under other debits and Rs 403.5 Crore for 2009-10. In 2007-08 higher provision under bad and doubtful debts

for the amount outstanding from Kerala Water Authority based on the Government Order G.O.Ms. No. 45/08/WRD dated 26-9-2008 for one time settlement between KSEB and KWA. KWA owes Rs. 774 Crore to KSEB as arrears of power charges. As per the agreement, KWA will remit Rs. 250 Crore in lumpsum as one time settlement of arrears. Hence KSEB has made Rs.524 crore as bad debts for 2007-08. For 2009-10, Rs.403 Crore was earmarked as part of the netting off of dues.

5.8.2. Deliberations in the State Advisory Committee

According to Shri. Sood, NTPC, Government should not make KSEB to bear the subsidy committed by the Government. He also criticized the Board for not filing the proposals for bridging revenue gap. Shri. George Thomas, objected to the proposal of KSEB on netting off of dues. He also mentioned that that write offs should not be allowed. 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

HNL employees Association argued that the netting of dues should not be allowed. Cominco Binani Employees Union also strongly opposed to the write off of the Government dues, which will be directly passed on to the other consumers. Further, they also opposed the idea of regulatory asset and opposed the move to write off KWA dues, which may give wrong signal to consumers, who makes prompt payment. Standing Council of Trade Unions, Kerala News Print Employees Union, Hindustan Paper corporation Employees Association also strongly objected the write off of Government dues and KWA dues. Binani Zinc Employees Organisation mentioned that the cash balance available to the Board is huge. They also objected to the write off of KWA dues. The Association requested that the write off proposed by the Board should be disallowed following the principles and stand taken by the Commission in the previous Orders. The Association pointed out that the Board is trying to show losses in 2007-08 through a write off of Rs.530 Crore due from KWA. The balance sheet of the Board shows cash surplus which is over and above what is ideally required. Hence the excess profit earned by the Board should be refunded to the Consumers in the form of reduction in tariff. The Association also pointed out the discrepancy in the accounts submitted by the Board i.e., in the Balance sheet in the Annexure of filing shows receivable from sale of power of Rs.968.5 Crore as on 31-3-2008, however, the

receivable from sale of power is shown as Rs.1964 Crore, ie, a difference of Rs.1000 crore. M/s Binani zinc also objected the write off of KWA dues and dues from the Government.

5.8.4. Analysis and decision of the Commission

The Board has projected about Rs.27.30 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, the major items 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 2009-10, 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. It is clearly evident from the 2007-08 accounts, that against Rs.72.88 Crore projected towards net prior period charges in 2007-08, the actual turned out to be Rs.60.70 Crore as net income. The variation is about Rs.134 Crore. 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 as has been done in the previous Order for 2008-09, is inclined to disallow the provision under prior period charges as the same could be covered in the truing up exercise.

Regarding other debits, the Board has provided an astonishing provision of Rs.529.80 Crore as bad and doubtful debts for 2007-08, under the guise of the Government order dated 26-9-2008 on settling the dues of Kerala Water Authority (KWA). The Commission has sought details on the write off and the Board has provided a copy of the Government order. The details of arrears due from KWA as informed by the Board vide letter dated 7-2-2009 are as follows:

Arrears of KWA as on 31-3-2008 (Rs. Crore)			
	Principal	Surcharge	Total
Low Tension	330.29	112.22	442.51
High Tension	377.00	282.85	659.85
Total	707.29	395.07	1,102.36

The Board also stated that, though directions have been issued to KWA for remitting the current electricity charges, KWA has defaulted an amount of Rs.15.95 Crore in respect of demand raised from 1-4-2008 to 30-9-2008 which is as follows:

Arrears of KWA from 1-4-2008

	Demand	Surcharge	Total
	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)
Low Tension	6.77	0.61	7.38
High Tension	7.37	1.20	8.57
Total	14.14	1.81	15.95

Several consumers have raised objections on the netting off of the dues and write off of KWA dues. The Commission finds ample merit and justification in the arguments of the stakeholders on the write off of dues of KWA, as it will create a precedence and give wrong signals for the other consumers and encourage non-payment, which would jeopardize the financial soundness of the Board. Write off as proposed in the present manner is nothing but loading the burden of non-payment of charges by KWA in the tariff of other consumers. Hence write off must come as subsidy under section 65 of the Act as it would amount to giving concessions in the tariff to KWA. At present the Commission is not going into the merit or legalities of the write off which will be addressed in the truing up exercise. The Commission in the previous Order, has given detailed justification for not admitting the miscellaneous write off to the tune of Rs.403 crore as part of netting off of dues from Government. The Commission is not deviating from its position as no justification has been placed before the Commission to take alternate decision. Further, the legality of the write off is still in dispute and finality of such measure not taken place as the Government has not admitted it formally. As noted in the earlier section, the Accountant General of India, has made significant point in its Note to Audit report for the year 2006-07 endorsing the stand taken by the Commission. Considering all the above, the Commission is in a position to allow only Rs.1.10 Crore under 'Other expenses' which is inclusive of research and development expenses and provision for bad and doubtful debts.

5.9. Return on Equity

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

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 2009-10 pending the decision of Government on the ascertainment of actual amount of equity of Government of Kerala in line with the Government Order issued.

5.10. Expenses and Interest Capitalized

The Board has provided Rs.55.82 Crore towards expenses capitalized and Rs.27.87 Crore towards interest capitalized. The Commission provisionally allows these items in the ARR for 2009-10 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:

Aggregate Revenue Requirements for 2009-10

Particulars	2009-10 (Rs. Crore)	
	Projection of the Board	Approved by the Commission
Generation Of Power	310.85	301.54
Purchase of power	3,024.61	2,781.99
Interest & Finance Charges	345.31	333.11
Depreciation	489.41	477.90
Employee Cost	1,069.96	1,069.96
Repair & Maintenance	152.74	152.74
Administration & General Expenses	155.21	64.22
Other Expenses	431.40	1.10
Gross Expenditure (A)	5,979.49	5,182.57
Less : Expenses Capitalised	55.82	55.82
Less : Interest Capitalised	27.87	27.87
Net Expenditure (B)	5,895.80	5,098.88
Return on Equity	217.42	217.42
ARR (D) = (B) + (C)	6,113.22	5,316.30

As against the total ARR of Rs. 6113.22 Crore projected by the Board for 2009-10, the Commission based on the reasons given in the above sections hereby approves Rs.5316.30 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 based on the revised tariffs. The Board estimated Rs.4522.93 Crore as revenue from the sale of energy within the State. The revenue projections have been made on the assumption that restrictions would continue till May 2009. Accordingly revenue from excess consumption at higher rates have also been included for the two months (April and May 2009) in the revenue estimations. Summary of sales estimations provided by the Board is given below.

Revenue from sale of power proposed for 2009-10

Sl No	Category	2007-08 (actual)		2008-09 (revised estimate)		2009-10 (estimate)	
		Sale of energy (MU)	Revenue from tariff (Rs. Cr)	Sale of energy (MU)	Revenue from tariff (Rs. Cr)	Sale of energy (MU)	Revenue from tariff (Rs. Cr)
(1)	Revenue at Normal tariff						
	Domestic	5595.12	962.92	5941.00	1071.71	6567.00	1239.57
	NPG	7.73	0.00	9.00	0.00	10.00	0.00
	Commercial	1378.33	921.00	1390.00	939.29	1672.00	1130.53
	Public Lighting	248.56	47.26	275.00	52.25	305.00	58.00
	Irrigation & Dewatering	230.55	24.31	235.00	21.64	238.00	21.95
	Industrial LT	984.18	408.19	956.00	380.85	1092.00	425.91
	HT&EHT	3139.50	1259.70	2745.10	1151.77	3272.82	1334.04
	Railway Traction	109.26	39.23	115.00	49.23	149.00	60.85
	Bulk Supply	356.62	102.23	303.00	107.23	374.00	128.55
	Sub total	12049.85	3764.83	11969.10	3773.96	13679.82	4399.40
(2)	Revenue from excess consumption at actual power purchase cost	---	---	555.58	439.10	164.7	123.53
(3)	Fuel surcharge	---	---	---	180.00	---	---
(4)	Revenue from sale of off-peak surplus power	---	---	421.38	427.86	---	---
(5)	Grand Total (1)+(2)+(3)+(4)	12049.85	3764.83	12900.25	4820.92	13844.52	4522.93

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, miscellaneous charges etc., The details are given below:

Revenue from Non-Tariffs (Rs. Crore)

Sl. No.	Particulars	2006-07	2007-08	2008-09			2009-10
		Actual	Accounts	ARR	KSERC	Revised	
1	Meter Rent/Service Line Rental	132.59	137.19	145.00	145.00	145.00	152.00
2	Wheeling Charges Recoveries	19.24	0.00	30.00	30.00	0.00	0.00
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	99.91	130.50	130.50	105.00	110.00
	Total	276.43	237.10	305.50	305.50	250.00	262.00
4	Grant in aid for Research Projects	0.00	0.00	0.00	0.00	0.00	0.00
5	Interest on Staff Loans and Advances	1.07	0.87	0.85	0.85	0.85	0.60
6	Income from Investments	0.66	1.10	0.75	0.75	1.15	1.15
7	Interest on Advances to suppliers/ Contractors	1.07	4.24	1.25	1.25	1.25	1.30
8	Interest from Banks	23.53	106.00	100.35	100.35	141.85	130.30
9	Rebate Received	66.57	57.05	69.51	69.51	70.80	65.66
10	Income from Trading	10.34	10.32	15.00	15.00	8.00	10.00
11	Income from staff welfare Activities	0.00	0.00	0.00	0.00	0.00	0.00
12	Miscellaneous Receipts	26.80	22.21	35.00	35.00	25.00	30.00
	Total	130.04	201.79	222.71	222.71	248.90	229.01
	Grand Total	406.47	438.89	528.21	528.21	498.90	491.01

6.3 Deliberations in the Advisory Committee

Advisory Committee has not made any comments on the revenue projections.

6.4. Objections of the Stakeholders

The Association and HNL mentioned that the Board has projected the revenue from tariffs without consideration of the provisions of the Act, Tariff policy and directions of ATE in reducing the cross subsidies. The domestic and agriculture categories are subsidized to the tune of about Rs.1500 Crore, which needs to be addressed by the Board. Based on the projection of the Association there is a revenue surplus to the tune of Rs.509 Crore. M/s Binani zinc limited stated that Regulatory Asset shall not be allowed as it pertains to uncontrollable costs only. The cash surplus generated by the Board should be used for meeting the additional cost of power purchase and to reduce the interest burden. According to them a re-estimation of ARR would result in Rs.500 crore surplus. Shri. Balachandran Nair, suggested that meter rent should be discontinued once the cost of meter is recovered from the consumers. He also suggested to withdraw the thermal surcharge because of the unscientific manner in which it is charged. The different trade unions stated that there would be a revenue surplus of about Rs. 500 crore if ARR is properly estimated.

6.5. Analysis and decision of the Commission

The Board has projected the income based on the existing tariffs. The Board has included income from excess consumption at rate of Rs. 7.50/kWh. However, the rates for the excess consumption have been reduced to a level of about Rs.5.5/kWh. Hence, the Commission re-estimates the revenue from excess sales as Rs.90.59 crore instead of Rs.123.53 Crore projected by the Board. Accordingly the income from sale of energy would be Rs. 4489.99 crore as against Rs.4522.93 Crore estimated by the Board.

The Commission has sought the details on the deposits and sources of interest under miscellaneous income, but the Board did not provide the complete details. The Board has stated that deposits has been made by the Board in the earlier years for meeting specific repayment obligations, towards margin money and as a prelude towards constitution of the proposed pension fund. Deposit period varies upto 5 years and

hence income has to be recognized throughout the years in which the tenure of deposits spreads. Though the Board has stated that 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 of Accounts furnished by the Board, already staff pension fund under Account Code 57.140 is existing. The Commission sought reports on the constitution of pension fund. However the Board did not provide the reports but the Board stated that tax consultants M/s.Varma and Varma had forwarded a draft pension fund and gratuities fund regulations which is being perused. The Board also approached LIC for conducting the actuarial valuation of pension liability, for which final reply is awaited. Based on the details provided by the Board, the Commission is not in a position to made any judgment in the matter. Considering the information available, the Commission approves the revenue from sale and miscellaneous charges as below.

Approved Revenue from tariff & Non Tariff

Particulars	2009-10	2009-10
	Proposed	Approved
	(Rs. Crore)	(Rs. Crore)
1. Revenue from Tariffs		
Revenue from existing tariff	4399.40	4399.40
Revenue from Excess sales	123.53	90.59
Total Revenue from sale of power	4522.93	4489.99
2. Non Tariff Income	491.01	491.01
3. Total Income	5013.94	4981.00

CHAPTER – 7

SUMMARY OF ARR & ERC FOR 2009-10

As detailed in the previous chapters, the Commission approved Aggregate Revenue requirement of Rs.5316.30 Crore as against Rs.6113.22 Crore proposed by the Board. The revenue from sale of power and non tariff income has been approved at Rs.4981 Crore as against Rs. 5013.94 Crore proposed by the Board. The summary of the ARR & ERC for 2009-10 is as follows:

Particulars	2009-10 (Rs. Crore)	
	Projection of the Board	Approved by the Commission
Generation Of Power	310.85	301.54
Purchase of power	3,024.61	2,781.99
Interest & Finance Charges	345.31	333.11
Depreciation	489.41	477.90
Employee Cost	1,069.96	1,069.96
Repair & Maintenance	152.74	152.74
Administration & General Expenses	155.21	64.22
Other Expenses	431.40	1.10
Gross Expenditure (A)	5,979.49	5,182.57
Less : Expenses Capitalised	55.82	55.82
Less : Interest Capitalised	27.87	27.87
Net Expenditure (B)	5,895.80	5,098.88
Return on Equity (C)	217.42	217.42
ARR (D) = (B) + (C)	6,113.22	5,316.30
Less Non-Tariff Income	491.01	491.01
Less : Revenue from Tariff		
(a) Within the State	4399.40	4399.40
(b) Excess sales	123.53	90.59
Total Revenue from sale of power	4522.93	4489.99
Revenue Gap	(1,099.28)	(335.30)

Based on the approved ARR & ERC the Commission expects a revenue gap to the tune of Rs.335.30 Crore for 2009-10.

7.1. Order of the Commission

The Commission after considering the documents placed before it and having heard the views of stakeholders and the Board, hereby approves an Aggregate Revenue Requirement of Rs.5316.30 Crore and total expected revenue receipts of Rs.4981.00 Crore as against Rs.6113.22 Crore and Rs.5013.94 Crore projected by Kerala State Electricity Board in the Petition 60 of 2008 for the year 2009-10, subject to the observations and conditions mentioned in this Order. Hence there would be a revenue gap of Rs.335.30 Crore as against the revenue gap of Rs.1099.28 Crore projected by the Board. The Commission would seek to rationalize the tariff and directs the Board to file tariff petition within 2 months from the date of this Order. Till such time, **the Commission allows to continue the existing tariff.**

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. **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. Board shall initiate a study for assessing loss levels in 33kV/11kV system and LT system separately. Study shall be conducted for a representative urban and rural circle. The preliminary results shall be filed within 3 months from the date of this order.
3. Separation of technical and commercial loss : The Board shall submit along with ARR & ERC separate estimates for technical and commercial losses
4. The Board shall prepare a plan for meter replacement and the compliance should be closely monitored with report to the Commission. While replacing faulty meters oldest faulty meters has to be replaced first.
5. The Board shall file a proposal on rationalization of ToD tariffs for the HT-EHT consumers within 2 months from this order.
6. 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.
7. The Board shall prepare an implementation plan including procurement plan for all the important capital projects under generation, transmission and distribution with information to the Commission
8. A detailed plan for realisation of the huge amount of arrears of electricity charges shall be prepared and submitted to the Commission.

9. A proposal for introducing ToD tariff for LT industrial consumers may be submitted considering the revenue implication and reducing the peak demand.
10. A proposal for incentivizing the off peak consumption shall be filed by the Board within two months.
11. Plan of Energy Audit shall be filed within two months from the date of this order.
12. The Board shall file scheme wise details of investment proposed for approval
13. The Board shall invite proposals from developers of non-conventional energy sources such as small hydro, wind, solar, and co-generation urgently so as to draw at least the 5% of energy earmarked from such sources
14. Proposals for pension fund and productivity linked employee cost reduction programme be submitted
15. The write off of dues from KWA and others if any shall not be approved unless it is as per the provision of Section 65 of the Act.
16. The major accidents and breakdowns occurred during the last two years is a grim warning and reminder for time bound maintenance and replacement of plants and equipment whose useful and efficient life span is almost over. KSEB shall urgently take up steps for preparation and execution of a programme for the repair/replacement of these plants and equipments with the approval of the Commission to avoid future mishaps.

ANNEXURE