

CHAPTER – 7

ANALYSIS OF ERC AND TARIFF FILING OF GESCOM

7.0 Proposal of GESCOM in the ERC for FY06 / Tariff filing:

GESCOM in their ERC for FY06 have requested the Commission to approve ARR of Rs.1443.69 Crs. for FY06. The revenue at existing tariff for FY06 is Rs.754.49 Crs. and GESCOM proposed tariff revision to an extent of 11.12% to bridge the revenue gap of Rs.83.74 Crs. after considering GoK subsidy of Rs.605.46 Crs.

7.1 Compliance to Directives and Performance of GESCOM

The Commission has issued several directives to GESCOM and the compliance to these directives is enclosed at **Annexe-3**. The performance of GESCOM in the areas of Computerisation and MIS, Metering, transformer failures, accidents, collection performance, cost coverage and energy audit is discussed here under:

7.1.1 Computerisation and MIS

1. GESCOM has stated that the computerisation of billing and ledgers - Total Revenue Management (TRM) has been completed in all the sub-division of GESCOM and critical information like revenue demand & collection, disconnection details, meter reading, new applications registered etc are being collected through e-mails from sub-divisions.
2. Further, GESCOM has stated that computerisation of inventory management has commenced in Gulbarga and Raichur divisions. It is also stated that IVRs have been installed in Gulabarga for recording consumer complaints, and also a website has been hosted. (www.gescom.org). GESCOM has also developed a software to get information about feeder-wise energy audit, interruption details, DCB details.

3. While appreciating the efforts of GESCOM, the Commission notes that in spite of computerisation the quality of data furnished has not at all improved. Hence the Commission would rigorously monitor the implementation of computerisation in GESCOM.

7.1.2 Metering

1. As per the EA 2003, no installations should be supplied with electricity without providing a correct meter, after two years from the date of coming into force of the Act (i.e. after 09.06.2005). GESCOM has already undertaken universal metering programme from 2002 itself as per the policy directive of GoK. The progress of metering in GESCOM as per the information available with the Commission is as below:

Table-7.1

Progress of metering in GESCOM

Category	No. of Installations existing as on 31.03.05	No. of Installations for which meters are fixed as on 31.03.05	Percentage of progress
IP Sets	205634	10707	5.21%
BJ/KJ Installations	407474	204534	50.19%
Street Lights	7337	7337	100%

2. **The Commission while appreciating the efforts of GESCOM in achieving good progress in BJ/KJ & Street lights** notes that GESCOM is yet to comply with the requirement of the Electricity Act to provide meters to all installations, especially to IP sets where the progress is very poor.
3. Regarding DC/MNR installations under metered category, the status in GESCOM is as indicated below:

	% of DC/MNR meters
4 th quarter of 2004:	15.07
4 th quarter of 2005:	13.01

4. The Commission notes that GESCOM has not taken necessary steps to reduce DC/MNRs installations, which has direct bearing on Distribution loss.

7.1.3 Transformer Failure Rate

As per the information available with the Commission, the distribution transformer failure rate in FY05 is 21.07% as against 16.37% in FY04. The Commission notes with concern that the failure rate of transformers has increased indicating that more efforts are required to bring down the failure rate.

7.1.4 Accidents

1. Review of electrical accidents in GESCOM indicates that total accidents have increased from 278 in FY04 to 310 in FY05. The Commission further notes that fatal accidents (to human beings) have marginally decreased from 54 in FY04 to 52 in FY05.
2. The Commission notes that total number of accidents have substantially increased (by over 11.51 %) in GESCOM and is a matter of serious concern requiring immediate action by GESCOM.

7.1.5 Revenue Collection performance

1. The following is the summary of collection performance of GESCOM based on the DCB furnished to the Commission:

Table-7.2**Collection Performance****in Rs. crores**

Year	Revenue Demand	Collection	Collection as a percentage Current year Demand
FY02	450.96	403.74	89.53%
FY03	564.76	562.83*	99.66%
FY04	654.88	656.63**	100.27%
FY05	705.18	616.29	87.39%

*with BRP Adjustments

** Includes waiver of IP set arrears.

2. The Commission notes that collections are not satisfactory during FY05 and requires concerted efforts to improve collections.

7.1.6 Cost Coverage

1. The cost coverage in GESCOM for the last 3-years, i.e. from the year of its formation, is as indicated below:

Table-7.3**Cost Coverage**

Year	Input to HESCOM [MU]	Energy Sales [MU]	Average Power Purchase cost Rs/Unit	Average cost of supply Rs/Unit	Demand per Unit [Revenue demand/energy sales] Rs./Unit	Realisation /unit on Energy input [Collection /energy input] [Rs./unit]
FY03*	3875.57	2569.87	2.18	3.92	2.26	1.45
FY04**	4210.54	2580.87	2.17	4.24	2.55	1.56
FY05***	4656.58	2927.83	2.28	4.21	2.34	1.32

*As per ERC filing

** Annual Accounts

***Provisional

2. From the above table it may be seen that the revenue realised does not cover even the power purchase cost in all the years and there is a huge gap between average cost of supply and revenue demand in all the years.

7.1.7 Energy Audit

1. The Commission is monitoring the losses in the 11 towns/cities on a monthly basis. The losses in the 11 towns /cities is indicated as under:

Table-7.4

Loss in 11 Towns/Cities of GESCOM

Towns	Input to Town IN MU	Metered Sales in MU	Metered sales in %age	Unmetered sales in MU	Unmetered Sales in %age	Total sales in MU	Loss in %
GULBARGA	174.12	117.23	67.33	3.76	2.16	120.99	30.52
Shahabad	12.45	9.06	72.75	0.00	0.00	9.06	27.25
YADGIR	20.58	10.22	49.64	5.04	24.48	15.25	25.88
BIDAR	98.82	45.01	45.55	16.08	16.27	61.09	38.18
RAICHUR	108.50	67.83	62.51	8.96	8.26	76.79	29.22
SINDHANUR	19.20	11.83	61.62	3.21	16.70	15.04	21.68
KOPPAL	21.08	16.33	77.47	0.19	0.91	16.52	21.63
Gangavathi	31.91	25.36	79.48	0.81	2.55	26.18	17.97
HOSPET	66.77	45.30	67.85	7.37	11.03	52.67	21.12
BELLARY	151.08	97.78	64.72	0.52	0.34	98.30	34.94
B'KALYAN	15.58	5.45	34.99	4.43	28.42	9.88	36.59
Total	720.11	451.41	62.68	50.36	6.99	501.77	30.32

2. The Commission notes that in GESCOM out of the 11 towns, the losses are more than 15% in all the towns/cities. The Commission notes that the directive of the Commission to reduce losses in these towns/cities to 15% has not been achieved and GESCOM has miserably failed in achieving target loss levels. The Commission directs GESCOM to initiate necessary action to reduce loss level to 15% in the these towns/cities in FY06 and failure to achieve the target by GESCOM may force the Commission to initiate suitable penal actions under the provision of EA 2003.

7.2 Objections

A summary of the objections received and the responses from GESCOM are discussed separately in **Annexe-2**.

7.3 Commission's Analysis of ERC/Tariff Filing

7.3.1 Financial Year 2004 in Retrospect

1. The Commission had approved the ERC of GESCO for FY04 in the Tariff Order dated 10.03.2003. Subsequently KPTCL/ESCOs applied for amendment of tariff arising out of additional power purchase cost due to change in Hydro-thermal mix. The Commission issued a Tariff Amendment Order on 15.12.2003 approving the BST from 193.57 paise per unit to 209.35 paise per unit for supply of electricity to ESCOs /Hukkeri Society. The revised BST came into effect from 01.01.2004. Consequent to this change in BST, the Commission in the said Order revised the retail tariff for LT2b- Pvt. Professional & other Pvt. Educational Institutions, LT3- Commercial, LT5- Industries, HT2a- Industries and HT2b- Commercial categories.
2. GESCO has furnished the audited annual accounts for FY04 and as such the Commission would consider the same for the purpose of finding out the actual revenue gap for FY04. The differences between approved ERC figures and the actuals are as indicated below:

a) Sales forecast

1. GESCO had estimated sales of 2719 MU against which the Commission had approved sales of 2814 MU, which included additional metered sales of 73 MU due to efficiency improvements. The Actual Sales as per Audited Accounts is 2570 MU. The category wise sales approved and actuals as per audited accounts is indicated below:

Table-7.5**Approved Energy sales and actual sales for FY04**

(Million Units)

Category	Approved as per ERC	Actuals as per audited accounts	Difference
Bhagya Jyothi	89	81	-8
Domestic Lighting	382	386	4
Commercial	79	71	-8
IP Sets unmetered (up to 10 HP) LT-4 a, b & d	1402	1252	-150
IP sets -LT-4c	7	4	-3
LT Industries	149	131	-18
Water Supply-LT	62	64	2
Street Lights	63	82	19
Temporary	3	3	11
LT -Total	2236	2074	-162
HT- Water supply	35	38	3
HT- Industries	426	422	-4
HT- Commercial	23	21	-2
HT-Irrigation	12	6	-6
HT- Residential	9	9	0
HT-Total	505	496	-9
Additional metered sales due to efficiency improvement	73		
Metered Sales including additional sales	1260	1155	-105
Unmetered Sales	1554	1415	-139
Grand Total	2814	2570	-244

2. It is noted that there is an overall decrease in sales by 244 MU as against the approved sales. There is a decrease in metered sales by 105 MU [including additional metered sales] and decrease of 139 MU in unmetered sales in comparison to approved sales. The decrease in metered sales indicates that the efficiency improvements proposed by the Commission have not been achieved.

b) Distribution loss & Energy Input

1. Commission had approved 3858 MU as input energy to GESCOM for FY04. As against this the actuals as per GESCOM's annual report is 4211 MU. The Commission notes that there is a difference of 353 MU between accounts and approved figures.
2. Regarding distribution loss for FY04, the Commission had approved 27.05 % as against the proposed loss of 29.21% by GESCOM, in its Tariff Order 2003. The actuals as per accounts is 38.70%. This indicates that the loss has actually increased by 11.65% compared to the approved level. The Commission notes that GESCOM has not taken any initiative to reduce the losses. It also indicates that GESCOM is not serious in achieving the targets set by the Commission for reduction of losses.
3. One of the factors that affect the distribution loss is IP set consumption. In the Tariff Order 2003, the Commission estimated the IP set consumption for FY04 as follows vis-à-vis the figures projected by GESCOM.

Table-7.6

No. of IP sets(Mid year) as per monthly reports	Projection by GESCOM		Estimation by the Commission	
	Specific consumption	Total consumption in MU	Specific consumption	Total consumption in MU
194810	7084	1380	7197	1402

4. The above-assessed IP set consumption for FY 04 had been worked out considering the quantum of restricted power supply during FY03.
5. The actual IP consumption for FY 04 as per annual accounts is 1252 MU (LT 4 a & b) and the year-end number of installations is 200061. The specific consumption for FY 04 is 6356 units/IP set considering the FY04 mid year figure of 196985. Thus the actual specific consumption has decreased by 841-units/IP set as compared to the Commission's

estimates. The difference between the actual consumption and the estimates is higher by 150 MU.

6. The cumulative effect of the above has resulted in increase in actual distribution loss level as per actuals as against the approved levels. The Commission notes that the metered sales have decreased by 8.3% and unmetered sales have decreased by 8.94% as compared to the approved sales. The actual input has increased by 9.15% over the approved input energy to GESCOM for FY04. This indicates that additional power purchase has been utilised to meet the losses.

c) Review of Capital Investment Program for FY04

1. In the Tariff Order 2003, the Commission had approved the Capital Investment Programme of GESCOM amounting to Rs.107.70 Crs. for FY04, which included APDRP works amounting to Rs.72.20 Crs. subject to detailed scheme-wise review and also subject to obtaining approval of the Commission for all the scheme reports of works costing more than Rs.1 crore.
 - a. GESCOM submitted Scheme Reports/DPRs costing more than Rs.1 crore for approval of the Commission vide GESCOM letter dated 19.07.2003. After review of the above DPRs/Scheme Reports a number of observations were made and the same was communicated to GESCOM vide KERC letter dated 24.09.2003. GESCOM did not furnish any clarifications in respect of the observations made by the Commission in spite of reminders. GESCOM is also not providing quarterly progress reports of works for works costing more than Rs 1 crore although they are required to furnish the same as per the Practice Directions issued by the Commission in respect of the Capital works. The Commission therefore was unable to review the progress achieved both physical as well as financial in respect of the Capital works.

- b. GESCOM has spent Rs.50.02 Crs as against the approved amount of Rs.107.70 Crs. in FY04. The Commission notes that the amount actually spent is not even 50% of the approved outlay.

d) Annual Revenue requirement

1. The Commission had approved a net annual revenue requirement of Rs.993.51 Crs. for FY04 as against the GESCOM's proposal of Rs.1082.93 Crs. The Commission notes that the actual expenditure for FY04 is Rs.1093.38 Crs. The Comparison between actuals as per audited accounts and as approved by the Commission is indicated below:

Table-7.7

ARR approved by the Commission and ARR as per actuals for FY04

Particulars	Expenses approved by KERC	Actuals as per audited accounts	Rs. Crs.
			Difference
Expenditure			
Power Purchase	818.82	912.53	93.71
Repairs & Maintenance	13.26	8.63	-4.63
Employee Costs	84.96	92.74	7.78
A & G expenses	8.62	11.77	3.15
Depreciation	38.82	34.35	-4.47
Interest & Finance Charges	22.93	16.87	-6.06
LESS: Expenses Capitalised	0	0	0
Add: Other Charges/Debits	0	-4.51	-4.51
Add: Net prior period credits/Debits	0	2.72	2.72
Provision for taxation		20.98	20.98
Add: Return on NFA	8.22		-8.22
Total Expenses	995.63	1096.08	100.45
Less other income	2.12	2.70	0.58
Net ARR	993.51	1093.38	99.87

The variations in the expenditure is discussed below:

i) Power Purchase cost

The Commission in its tariff order 2003 had approved Rs.818.82 Crs. as power purchase cost [with a BST of 193.57 paise per unit and Transmission tariff of 18.67 paise per unit] for an input energy requirement of GESCO of 3858 MU. The actuals for FY04 as per audited accounts is Rs.912.53 Crs. for an input of 4211 MU, indicating an increase in power purchase cost by Rs.93.71 Crs. an increase by 11.44%. The Commission notes that the increased cost in power purchase is on the following accounts:

- i. Increased quantum of power purchase by 353 MU
- ii. Revision of BST to 209.35 paise per unit effective from January 2004.

ii) Repairs & Maintenance

The approved R & M cost was Rs.13.26 Crs. The actuals as per audited accounts is Rs.8.63 Crs. resulting in a savings of Rs.4.63 Crs. mainly in R&M of Plant and Machinery, Lines & Cables and buildings.

iii) Employee cost

In Tariff Order 2003, the Commission had approved Rs.84.96 Crs. as against Rs.88.13 Crs. proposed by GESCO. The actual employee cost as per audited accounts is Rs.92.74 Crs. an increase of Rs.7.78 Crs. After excluding bonus of Rs.1.10 Crs. as per accounts and Rs.2.04 Crs. towards free electricity supply as per Tariff Order 2003, the employee cost would be Rs.89.60 Crs. The increase is mainly due to increase in terminal benefits & Staff Welfare (Rs. 2.83Crs.).

iv) Administration & General expenses

The Commission had approved Rs.8.62 Crs. as A & G expenses as against GESCO's proposal of Rs.10.35 Crs. As per audited accounts the A & G expenses for FY04 is Rs.11.77 Crs. an increase of Rs. 3.15 Crs. above the approved amount.

v) Depreciation

The Commission had approved an amount of Rs.38.82 Crs. as depreciation cost for FY04, which was based on the rates of depreciation as in GoI notification. The depreciation as per audited accounts is Rs.34.35 Crs. resulting in savings of Rs.4.47 Crs.

vi) Interest & Finance charges

GESCOM had proposed Rs.22.93 Crs. as Interest & Finance charges for FY04, which the Commission had approved. The actual Interest & Finance charge as per audited accounts is Rs.16.87 Crs. indicating savings of Rs.6.06 Crs.

vii) Other debits and Net prior period charges and credits

GESCOM had not made any provision for the above expenses in FY04. However, the Commission notes that as per the audited accounts other charges/ (debits) is shown as Rs.-4.51 Crs. and Net prior period credits is Rs. 2.72 Crs.

viii) Provision for taxation

The Commission had not made any provision for taxation, as the same was not proposed by GESCOM. However, as per annual accounts an amount of Rs.20.98 Crs. has been provided for taxation. The actual tax for FY04 is shown as 0.11 Crs and deferred tax as Rs.20.87 Crs.

ix) Reasonable return

The Commission had approved 3% on net fixed assets as reasonable return as proposed by GESCOM, which amounts to Rs.8.22 Crs. The Commission notes that the actual return as per annual accounts works out to Rs.8.13 Crs. indicating a marginal savings.

e) Gap of FY04

1. The revenue surplus/(Gap) before subsidy as per tariff order 2003 and as per actuals is as follows:

Table-7.8**Gap for FY04**

Particulars	(Rs. Crs.)	
	Approved by KERC	Actuals as per audited accounts
Net ARR	993.51	1093.38
Revenue from Sale of power	643.24*	657.31
Gap before subsidy	(350.27)	(436.07)

* Including additional sales

2. After deducting the amounts not allowed by the Commission for pass through in the tariff i.e., a) Bonus to employees as per annual accounts: Rs.1.10 Crs. and b) Free /subsidised electricity to employees as per Tariff Order 2003: Rs.2.04 Crs. the actual ARR works out to Rs.1090.24 Crs. and the gap before subsidy would be Rs.432.93 Crs.
3. However, the Commission notes that as per audited accounts an amount of Rs.421.76 Crs. is shown as R.E. Subsidy from GoK, which includes 3% return on NFA. Thus the gap for FY04 would be Rs.11.17 Crs. If deferred tax of 20.87 is excluded, there will not be any gap for FY04.

7.3.2 ERC for FY05

As discussed in Chapter-2 of this order, the Commission has not approved the ERC for FY05 of GESCOM. According to the provisional accounts of GESCOM for FY05, there is no revenue gap after considering the government subsidy of Rs.561 Crs.

7.3.3 ERC for FY06

1. GESCOM filed its ERC for FY06 on 31.05.2005. The Commission analysed the same and preliminary observation were communicated vide Commission's letter dated 24.06.2005 and letter dated 11.07.2005 on the following:
 - a. To furnish the actuals for FY05.
 - b. Capital investments plan.
 - c. Sales Forecast.
 - d. Details of Slab-wise consumption
 - e. Prevention of Electrical Accidents.
 - f. Distribution losses
 - g. Cost of service
 - h. Various expenses covered under ARR for FY06 and
 - i. Tariff Schedule.
2. GESCOM has furnished replies to the observation on the above issues vide its letter dated 11.08.2005 and 26.08.2005. Based on the ERC and replies furnished the Commission has analysed the ERC and the same is discussed in the following paras:

7.3.3.1 Sales Forecast

GESCOM has generally adopted the growth in FY 05 over FY04 for projecting number of metered installations & metered energy sales in FY06. GESCOM has projected the number of installations of BJ/KJ based on revised GoK scheme and energy on the basis of 18 units per installation per month for BJ/KJ, For streetlights 12 burning hours is considered for estimating the sales. IP set sales is estimated based on specific consumption. While projecting the number of installations, it is not clearly indicated as to whether the number of installations are year-end figures or mid year figures. Hence, Commission hereby directs GESCOM to indicate year-end figures in D-2 statement and mid-year figure in D-21 statement.

The validation of number of installations and energy sales as analysed by the Commission is discussed below:

I. Metered Categories

i) LT2-a Domestic Lighting

GESCOM had initially projected a mid-year figure of 10,43,010 installations for FY06. Subsequently in reply to the observations made by the Commission, GESCOM has considered a growth rate of 4.86% for FY06 on the basis of growth of installations in FY05 over FY04. The Commission notes that the 3-year CAGR is around 4.5% and the previous year's growth is around 5%. Hence the growth rate assumed by GESCOM is reasonable. Applying this growth the year-end number of installations would be 1085303.

For energy sales, GESCOM has projected initially a sales of 442.08 MU based on growth rate of FY05 on FY04. This has been revised to 407.03 MU. The Commission notes that the growth is inconsistent over the last five years. The previous year is 3% and based on this the projection of sales of 407.03 MU is reasonable.

ii) LT-3 Commercial Lighting

GESCOM has considered an addition of 3634 installations in FY06 based on the growth rate of FY05 over FY04. The number of installations projected is 138338 (mid-year) at a growth rate of 7.6%. The Commission notes that the 3-year and 5 year CAGR is in the range of 7 to 10%. Hence the growth rate of 7.6% is reasonable. Hence the number of year-end installations would be 143397.

For energy sales, GESCOM has projected initially a sales of 89.24 MU based on the growth in FY05 over FY04. This has been revised to 85.11 MU considering the actuals for FY05 at a growth rate of 9.3%. The Commission notes that the 3 year and the 5 year CAGR is in the range

of 7 to 10% . Hence the growth rate of 9.3% considered by GESCOM is reasonable. Therefore Commission accepts the revised projection of 85.11 MU.

iii) LT-5: LT Industries:

GESCOM had initially proposed an addition of 1325 installations considering a growth rate of FY05 over FY04. Based on this the projected number is 33138 at a growth rate of 4.41%. The Commission notes that the 3-year CAGR is around 4.5% and the growth rate in the previous year is 6.6%. Hence GESCOM's growth rate is reasonable and the Commission accepts the year end number of installations as 33138.

GESCOM has projected sales of 150.17 MU based on the growth rate in FY05 over FY04. The growth considered is 7.12%. The Commission notes that the 3-year CAGR is 4.5% and the previous year growth is 6.6%. Even though GESCOMs projection of growth rate is slightly higher, the Commission accepts the same considering the positive trend in the past two years. Hence the projection of 150.17 MU is acceptable.

iv) LT6 Water Supply Rural

GESCOM has considered addition of 1208 installations in FY06 based on number of installation serviced and pending applications, which seems to be reasonable. Hence the Commission accepts the year end number of installations of 109636.

GESCOM has projected a sales of 68.58 MU based for FY06. The basis for this projection is not furnished. In the absence of details the Commission is constrained to accept the sales projection of 68.58 MU.

v) HT-1 HT Water Supply

GESCOM has considered addition of 5 installations in FY06 based on FY05 additions. While projecting the numbers of installations, pending applications and the expected number of installations to be serviced

have to be considered. In the absence of this data the Commission adopts the esteemed figure of 55 installations as the year-end figure for FY06.

GESCOM has revised the sales to 45.21 MU from the initial 43.97 MU considering a growth rate of 10%. The Commission notes that the 3 year CAGR and the previous year growth is around 10%. Hence the growth rate proposed by GESCOM is reasonable. Therefore the Commission accepts the energy sales of 45.21 MU as projected by GESCOM

vi) HT-2a HT Industrial

GESCOM has projected the number of installation based on growth rate of FY05 over FY04. While projecting the numbers of installations, pending applications and the expected number of installations to be serviced have to be considered. Considering the growth in FY05 the year end installations would be 368 installations.

GESCOM has initially proposed 505.9 MU as the energy sales. This has been revised to 493.64 MU at a growth rate of 4.76%. GESCOM has stated that this growth rate has been assumed keeping in view open access. The Commission notes that the 3-year CAGR is around 14% and 5 Year CAGR is around 16%. Further, the previous growth rate is around 12%. The Commission notes that in spite of introduction of open access the growth rate assumed by GESCOM, is too low.

vii) HT-2b HT Commercial

GESCOM has proposed additions of 24 installations based on the number of additions in FY05. While projecting the numbers of installations, pending applications and the expected number of installations to be serviced have to be considered. In the absence of this data the Commission adopts the estimated year-end figure of 151 installations for FY06.

GESCOM has initially projected 25.02 MU, which has been revised to 28.75 MU at a growth rate of 18.89%. GESCOM has stated that this growth rate has been assumed due to anticipated increase in commercial installations. The Commission notes that the year on year growth rate is inconsistent and varies from 4% to 22%. Considering this variance the Commission accepts the growth rate of GESCOM and approves sales of 28.75 MU for FY06.

viii) HT-4 Residential

GESCOM has proposed an year end figure of 31 installations based on growth in FY05 over FY04. While projecting the numbers of installations, pending applications and the expected number of installations to be serviced have to be considered. In the absence of this data the Commission adopts the estimated year-end figure of 31 installations for FY06.

GESCOM has initially projected 12.74 MU, which has been revised to 17.44 MU at a growth rate of 25.65%. No justification has been given by GESCOM for this high growth rate. However the Commission notes that the 3-year and 5 year CAGR is in the range of 25 to 28%. Hence the Commission approves the sales of 17.44 MU for FY06.

The Commission notes that the variation in metered sales with respect to Commission's working is less than 2%. Hence, the Commission adopts the figures proposed by GESCOM for metered category.

II. Un-metered Categories

i) LT-1 BJ/KJ

GESCOM had projected 426680 installations for FY05 and 446680 installations for FY06 in the initial filing. Subsequent to validation by the Commission GESCOM has revised these figures to 405467 based on actuals for FY05 and 455467 for FY06 (Mid-year). While projecting the

numbers for FY06, GESCOM in their original filing had considered 20,000 additions for BJ/KJ. Subsequently, the same has been revised to 50,000 [Mid –year] by GESCOM based on revised target of 1.00 Lakhs.

Commission notes that in FY05 there is a net addition of about 19,000 installations. Based on the revised figures for FY06, there would be an increase of 1.0 lakhs installations during FY06, which may not be achieved keeping in view the past trends. However, the Commission accepts this number as it is a GoK policy.

Based on the mid-year number of installations for FY06, & 18 units per installation per month the energy sales for FY06 would be 98.38 MU as proposed by GESCOM.

ii) LT4-a&b Irrigation pump sets

GESCOM has estimated the mid-year figures for installations as 217925 (Revised). The sales to this category in FY06 have been estimated by GESCOM as 1584.97. Hence, the specific consumption would be 7273 units per IP/Yr.

However, based on the monthly reports furnished by GESCOM for FY05, the Commission has estimated the mid year figures for installations as 202407 and specific consumption as 7410 units per IP/Yr in FY05. Based on this specific consumption and mid year figure of 213134 in FY 06, the sales to this category in FY06 has been estimated by the Commission as 1579 MU.

iii) LT6 Street Lights

There is inconsistent growth over the last 5 years in number of installations. GESCOM had initially proposed an addition of 91 [Mid-year] installations during FY06. Subsequently, the additions have been revised to 221 [Mid-year]. Therefore the total number of installations for

FY06 at the end of the year would be 6766 considering the actual for FY05.

GESCOM has projected sales of 84.91 MU, based on 360 units/kW/month as directed by the Commission, which is reasonable.

The Commission notes that there is variation in number of un-metered installations as worked out by the Commission and as worked out by GESCOM. The un-metered energy sales as proposed by GESCOM and as worked out by the Commission varies by 0.32%. Hence, the Commission would adopt its own figures for the energy sales and number of installations to un-metered Categories.

Based on the above discussion, the Commission approves the number of installations and energy sales for GESCOM for FY06 as indicated in the Table below. However, the Commission directs GESCOM to note the observations made by the Commission on sales forecast for future guidance.

Table-7.9

Sales Estimates for FY06

Category	Type of Installation	As Proposed (revised)		As approved	
		No. of Consumers	Energy Sales(MU)	No. of Consumers	Energy Sales (MU)
LT-1(a)	Bhagya Jyothi	505467	98.38	505467	98.38
LT- 2(a)	Domestic Lighting /AEH	1085303	407.03	1085303	407.03
LT-2(b)	Private Prof. & Edl Institutions	629	4.11	629	4.11
LT-3	LT Commercial	143397	85.11	143397	85.11
LT-4 (a) & (b)	Irrigation pump sets - less than 10 HP	230216	1584.97	220634	1579.35
LT-4 (c)	IP sets more than 10 HP	440	4.08	440	4.08
LT-4(d)	Private Horticulture nurseries, Coffee & Tea plantations	44	0.12	44	0.12
LT-5	LT Industries	33138	150.17	33138	150.17
LT-6 (a) & (b)	Water Supply	109636	68.58	109636	68.58

Category	Type of Installation	As Proposed (revised)		As approved	
LT-6 (a) & (b)	Street Lights	6766	84.91	6766	84.91
LT-7	Temporary Power Supply	6446	4.69	6446	4.69
	LT Total	2121482	2492.15	2111900	2486.53
HT-1	HT Water Supply	55	45.21	55	45.21
HT-2(a)	HT Industries	368	493.64	368	493.64
HT-2(b)	HT Commercial	151	28.75	151	28.75
HT-3 (a) & (b)	HT Irrigation & LI Societies	120	11.34	120	11.34
HT-4	HT Residential	31	17.44	31	17.44
	HT Total	725	596.38	725	596.38
	Metered Category	1379758	1320.27	1379758	1320.27
	Unmetered Category	742449	1768.26	732867	1762.64
	Total	2122207	3088.53	2112625	3082.91

7.3.3.2 Distribution Loss & Energy Input

I. Assessment of IP Set Consumption

Estimation of IP set consumption is a key factor, which determines the distribution loss levels. Hence, it is worthwhile to discuss the approach taken by the Commission in determining the IP set Consumption in the previous order before arriving at the Consumption for FY06. IP set consumption for FY04 has already been discussed earlier. IP set consumption for FY05 and FY06 is discussed below.

a) IP set consumption for FY 05

GESCOM in the current ERC has proposed 205061 installations for FY 05. This has been revised to 205634 based on actuals. The energy sales for FY05 for this category are estimated by GESCOM as 1495.63 MU .

As per the monthly reports furnished by GESCOM, mid-year figure of installations would be 202407 and the energy consumption is 1500 MU. Hence, the specific consumption in FY 05 would be 7410 units per IP/Year.

The Commission vide its letter No.T/01/2003/1839 dated 04.11.2003 has informed ESCOMs that the monthly figures furnished in respect of IP sets would form the basis for estimating the IP set consumption. Hence, Commission adopts 7410 units/IP/Yr. as the specific consumption for estimating IP set Consumption in FY06.

b) IP set consumption for FY 06

GESCOM has projected the mid year figure of 217925 installations in the ERC for FY06 [Including 10,000 IP sets that might be regularised]. GESCOM had initially projected the sales based on average consumption of 6709 units. Based on this the sales had been projected as 1462 MU. Subsequently the same is revised to 1585 MU resulting in a specific consumption of 7273 units/IP/Yr.

The Commission notes that as per the gist of the discussions in the meeting with the Hon'ble Minister for Power on 20th April 2005, issued by the MD, KPTCL vide note dated 23.04.2005, the target for new IP installations for GESCOM is 5000. GESCOM has proposed regularisation of 10,000 unauthorised IP sets Hence, the total additions during FY06 would be 15000. The Year-end figure of IP sets for FY06 works out to 220634 and the mid-year figure for FY 06 would be 213134.

For the reasons stated earlier, the Commission would adopt the specific consumption of 7410 units/IP/year of FY05 to arrive at IP-consumption for FY06. Hence, the energy sales to IP-sets for FY 06 would be 1579 MU as against the revised GESCOM's sales of 1585 MU.

II Distribution Loss

The loss level for FY04 has already been discussed earlier. The loss for FY05 & FY06 is discussed in the foregoing paragraphs.

a) Loss for FY 05

As per the ERC filing the input energy to the GESCOM inclusive of EHT sales is 4480.0 MU. This has been revised to 4656.58 MU by KPTCL vide their letter dated 27.08.2005. The total revised sales for FY05 as per the filing are 2927.83 MU. The distribution loss works out to 37.12% for FY05.

b) Loss for FY 06

In the ERC filing for FY06 GESCOM has projected the revised energy input including EHT sales at 4740.00 MU and revised total sales of 3102.41 MU. The distribution loss works out to 34.55%.

The Commission in its Tariff Order 2003 had fixed 27.05% as the allowable distribution loss for FY04. The Commission notes that the actual loss in FY 04 was 38.94% as per annual accounts and in FY05 it was 37.12% [revised] as per ERC filing. The Commission notes that the loss level has increased by 11.89% in FY04 above the approved figure.

Such a high level of loss indicates existence of huge commercial loss which is also showing an increasing trend. GESCOM could have reduced the commercial loss considerably by proper management and effective implementation of ATL and reducing DC/MNR installations. This clearly indicates total inaction on the part of GESCOM to reduce/arrest losses. If this trend continues it would further add to financial woes of GESCOM.

The allowable loss level for GESCOM cannot be more than 27.05% already approved for FY04. It is worthwhile here to mention about the losses in 11 towns/cities being monitored by the Commission.

The losses excluding 11 cities/town in FY 05 are as indicated below:

Table-7.10

Losses excluding 11 Cities/Towns

Particulars	11 Towns	GESCOM excluding 11 Towns	GESCOM- Total
Input energy-MU	720.11	3936.47	4656.58
Loss- MU	218.34	1510.41	1728.75
% Loss to Input	30.32%	38.37%	37.12%

It is noted that the loss level in GESCOM both in the 11 towns monitored under energy audit as well as other towns is very high indicating that there is substantial commercial loss through out GESCOM, which can be reduced by better management. The Commission had already set a benchmark loss of 27.05% for FY04. Hence, Commission cannot set a loss level for GESCOM less than this for FY06. Therefore, GESCOM through better management ,apart from the Capex proposed for FY06, can bring down the loss substantially.

In view of the above, the Commission is constrained to keep the target at the same level as allowed in FY04 at 27.05%.

In the Tariff Order 2003, the Commission has stated that the true indicator of distribution loss is to reckon the same as a percentage of the input energy without including the EHT sales. The allowable distribution loss levels however have been expressed as a percentage of input energy sales inclusive of EHT sales. The distribution loss expressed as percentage of Input inclusive and exclusive of EHT sales for FY04 & FY05 are indicated hereunder:

Table-7.11
Distribution loss levels

Year	Input energy inclusive of EHT sales in MU	EHT sales in MU	Input energy excluding the EHT sales in MU	Total sales including EHT sales in MU	Total sales excluding EHT sales in MU	Distribution loss as a percentage of input energy inclusive of EHT sales in %	Distribution loss as a percentage of input energy exclusive of EHT sales in %
FY04 as per annual accounts	4210.54	320*	3890.54	2580.87	2260.87	38.70%	41.88%
FY05 as per ERC filing	4656.58	339.87*	4316.71	2927.83	2587.96	37.12%	40.05%
FY06 as per KERC	4774	351*	4423	3482.63	3131.63	27.05%	20.20%

* EHT sales as per ERC filing

** Includes additional sales

III. Energy Input for FY 06

GESCOM has estimated an energy input of 4740 MU. The approved input by the Commission as discussed in Chapter-3 is 4774 MU. Based on the allowable loss level of 27.05% and the approved input to GESCOM, the sales to be achieved by GESCOM would be 3483 MU. Hence, the Commission directs GESCOM to achieve additional metered sales of 400 MU in FY06 over & above the approved sales of 3083 MU through efficiency measures.

7.3.3.3 Capital Investment programme for FY06

1. GESCOM has proposed a capital investment Programme amounting to Rs.330.80 Crs. during FY06. The Commission sought certain clarifications from GESCOM in respect of their Investment programme. The Commission notes that adequate provision is not made in the

investment programme for providing meters to all the installations as required under EA 2003 and also notes that no provision has been made in the Investment Plan for FY06 towards preventive measures to reduce accidents. It is also noted that GESCOM has not been obtaining prior approval in respect of schemes costing more than Rs.1 crore, before taking them up for execution.

2. GESCOM while furnishing clarifications has requested the Commission to extend the time for metering all installations by one more year and further has stated that provision of Rs.320 lakhs has been provided for preventive measures to reduce accidents. GESCOM has prayed the Commission for allowing to go ahead with schemes, which are costing more than Rs.1 crore this time and has requested for increasing the cost limit from Rs.1 crore to Rs.5 crore.
3. Reconciled allocation figures in respect of Capital Investment Works for FY06 have been furnished by GESCOM as indicated below:

Table-7.12

**Scheme-wise allocation of Capital Investment programme proposed by
GESCOM for FY06**

Sl. No.	Scheme	Rs. crores
1.	SYSTEM AUGMENTATION & STRENGTHENING	
A.	Extension & Improvement	21.80
B.	ATL works (infrastructure works)	1.00
C.	Accelerated Power Development & Reform Programme	0.00
i.	On going	50.00
ii.	New	24.00
D	Replacement of faulty distribution transformers	10.50
	Sub-Total	107.3
2.	Service Connection	10.00
3.	RURAL ELECTRIFICATION (GENERAL)	
A.	Electrification of Hamlets/HB/JC/AC	27.30
B.	Energisation of IP sets	16.40

Sl. No.	Scheme	Rs. crores
C.	Kutir Jyothi	7.50
	Sub-Total	51.2
4.	TRIBAL SUB-PLAN	
A.	Electrification of Hamlets	1.70
B.	Energisation of IP sets	1.00
C.	Kutir Jyothi	1.50
	Sub-Total	4.20
5.	SPECIAL COMPONENT PLAN	
A.	Electrification of Hamlets/ (HB/JC/AC) RGRHCL	13.00
B.	Energisation of IP sets	3.00
C.	Kutir Jyothi	6.00
	Sub-Total	22.00
6.	Tools & Plants and computers	2.00
7.	Civil Engineering Works	2.00
8	Metering	
i.	DTC metering	45.00
ii.	Consumer metering	26.00
	Sub-Total	71.00
9	Transformers(Power & Distribution- Replacement of faulty ones)	0.50
10.	Construction Of New 33 KV Sub-Stations & Lines	54.40
11.	Computerization	3.00
12.	For Preventive Measures to reduce accidents	3.20
	GRAND TOTAL	330.80

4. The Commission approves the capital investment programme of Rs.330.80 Crs. for FY06 subject to detailed scheme-wise review. GESCOM shall furnish the scheme reports of all works including APDRP works costing more than Rs.1 crore for the approval of the Commission and Commission does not agree to review this limit. GESCOM may note that any lapses in obtaining approval in future will be appropriately dealt with by the Commission.

7.3.3.4 Power Purchase Cost

1. GESCOM has projected power purchase cost (including transmission charges) of Rs.1163.20 Crs. for an energy input at interface points of 4740 MU. The per unit power purchase cost works out to 245.40 paise.
2. In terms of Section 39 (1) of EA 2003, KPTCL is barred from trading in electricity with effect from 10.06.2005. Accordingly GoK vide order No. EN 131 PSR 2003 dated 10.05.2005 has accorded approval to ESCOMs to purchase power from various generating Companies. Allocation of power supplied by KPCL, VVNL, CGS and Conventional IPPs is on the basis of total energy consumption during the year FY05. NCE projects have been allocated to ESCOMs based on geographical location of the project.
3. The Commission had directed KPTCL to work out the ESCOM wise requirement of power purchases for FY06 based on the above GO. Accordingly, KPTCL has worked out ESCOM wise energy input for FY06. Based on KPTCL working the input energy to GESCOM would be 4740 MU.
4. The Commission approves power purchase quantity of 4774 MU at a cost of Rs.916.16 Crs. as discussed in Chapter –3.
5. The transmission charges at 19.42 paise per unit would be Rs.92.71 Crs.

7.3.3.5 Repairs and Maintenance expenses

1. GESCOM has proposed Rs.12.49 Crs. [revised] as R & M expenses for FY06. The expenditure for FY05 as per provisional actuals is Rs.12.02 Crs. indicating an increase of R & M expenses by 3.91%.
2. The Commission approves Rs.12.49 Crs. as the allowable R & M expenses for FY06 as proposed by GESCOM.

7.3.3.6 Employee Cost

1. Employee cost has been revised to Rs.110.23 Crs. [revised] as against initial estimates of Rs.101.94 Crs. This revision has been due to likely revision of DA in FY06. This indicates an increase of 19.84% over FY05 employee cost of Rs.91.98 Crs. as per provisional actuals.
2. The number of employees working in FY06 is estimated by GESCOM as 4122 as against 4159 in FY05 indicating a decrease of 37 employees in GESCOM.
3. GESCOM had computed DA at 67 % of basic salaries and subsequently revised to 73%. GESCOM's revised estimate is Rs. 30.66 Crs.
4. Terminal benefits is estimated as Rs.13.92 Crs. based on contribution to pension trust at 15.05% of basic and DA towards payment of pension and 1.86% towards gratuity.
5. Further, GESCOM has requested the Commission to allow any increase in pay scales as and when the new pay scales become effective
6. As decided in the earlier Tariff Orders, the Commission will disallow bonus of Rs.1.26 Crs. and cost of free/subsidised electricity to employees of Rs.2.04 Crs. [as per tariff order 2003] for FY06 also. After disallowing the above expenses, the allowable employee cost would be Rs.106.93 Crs.

7.3.3.7 A & G expenses

GESCOM has proposed Rs.18.43 Crs. as A & G expenses, which is 10.0% higher than FY05 provisional actuals. The Commission considers this increase over FY05 actuals as reasonable. Hence, the Commission approves A & G expenses for FY06 of Rs.18.43 Crs.

7.3.3.8 Depreciation

Initially depreciation had been provided as Rs.54.88 Crs. by GESCOM. Subsequent to validation by the Commission, the same was revised to Rs.40.32 Crs. The Commission approves provision of Rs. 40.32 Crs. towards depreciation.

7.3.3.9 Interest & Finance Charges

GESCOM had proposed Rs.37.04 Crs. initially and subsequently revised the provision to Rs.62.63 Crs. This increase is due to inclusion of interest on belated payment of power purchase, which the Commission has not allowed in the previous tariff orders. The Commission therefore approves Rs.33.93 Crs. only as Interest and Finance Charges for FY06.

7.3.3.10 Other Charges/Debits

A sum of Rs.4.37 Crs. (Revised ERC) has been proposed under this head. The above includes provision of Rs.2.50 Crs. towards Bad/doubtful debts, which the Commission has not allowed in the earlier tariff orders. The Commission therefore approves a sum of Rs.1.87 Crs. as expenses towards other debits.

7.3.3.11 Expenses Capitalised

GESCOM has not proposed any amount under this head.

7.3.3.12 Net Prior period charges & Credits

GESCOM has proposed Rs.3.23 Crs. under this head, which is allowed by the Commission.

7.3.3.13 Provision for tax

GESCOM has made a provision of Rs.1.5 Crs. towards tax in its filing. The Commission accepts this provision.

7.3.3.14 Reasonable return

1. The Commission had allowed RoR at 3% on NFA to the ESCOMs in the earlier years, since section 27 of KER Act 1999 stipulated that the provisions of Electricity (Supply) Act 1948 applies in the case of Board or its successor entities for determination of revenue of the licensees and further that GoK had stipulated 3% RoR in respect of erstwhile KEB.
2. With the enactment of Electricity Act 2003, the Electricity (Supply) Act 1948 has been repealed, save otherwise provided in EA 2003. As per section 61 of the Electricity Act 2003, the Commission shall specify the terms and conditions of tariff and in doing so the Commission shall be guided by, amongst others, the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees.
3. Further as per the draft Tariff Policy dated 16.03.2005 issued by the Ministry of Power, Gol, the rate of return on equity for generation and transmission projects as notified by the Central Commission would be adopted by the SERCs for distribution. As discussed in Chapter-3 of this Order, the Commission has allowed 12% Return on Equity (RoE) to KPTCL. On the same lines, the Commission decides to allow 12% Return on Equity (including reserves) amounting to Rs.19.13 Crs. against HESCOM's proposal of Rs.8.13 Crs.

7.3.3.15 Other Income

GESCOM has indicated Rs.4.80 Crs. as Other Income from trading, soft loans to employees and miscellaneous receipt. The Commission approves the estimate of GESCOM.

7.3.3.16 Annual Revenue Requirement

Based on the above discussions a summary of the ARR proposed by GESCOM and approved by the Commission is as under:

Table-7.13**ARR proposed by GESCOM & as approved by KERC**

Particulars	Proposed by GESCOM	Approved by KERC
Expenditure		
Power Purchase	1163.20	916.16
Transmission Charges		92.71
Repairs & Maintenance	12.49	12.49
Employee Costs	110.23	106.93
A & G expenses	18.43	18.43
Depreciation	40.32	40.32
Interest & Finance Charges	62.63	33.93
LESS: Expenses Capitalised	0	0
Other Charges/ (Debits)	4.37	1.87
Net prior period credits/(Debits)	3.23	3.23
Add: Provision for taxation	1.5	1.50
Add: Return equity @ 12%	8.13	19.13
Total Expenses	1424.53	1246.70
Less: other income	4.80	4.80
Net ARR	1419.73	1241.90

7.3.3.17 Average Cost of Supply:

Considering the proposed ARR of Rs. Crs. 1419.72, GESCOM has worked out the average cost of supply for FY06 as 459.61 paise per unit. However, after considering the ARR and sales as allowed by the Commission, the average cost of supply would be 402.82 paise per unit as indicated below:

Table-7.14

Particulars	Proposed by GESCOM	Approved by KERC
Net ARR (Rs crores)	1419.72	1241.90
Sales –MU	3089	3083
Average cost of Supply Paise per unit (Paise per unit)	459.61	402.82

7.3.3.18 Revenue from Existing Tariff

1. The Commission has pointed out the discrepancies in the revenue estimates made by GESCOM during validation. In the absence of any further credible information, the Commission accepts the revised revenue estimates of GESCOM at existing tariff of Rs.757.05 Crs.
2. The Commission notes that revenue estimation is an important exercise in the whole ERC estimation. In the earlier Tariff Orders the Commission has mentioned about the necessity for developing a systematic approach towards revenue estimation by adopting a robust sampling procedure. The Commission once again reiterates that a systematic approach needs to be adopted by GESCOM for realistically forecasting the revenue in next filings.

7.3.3.19 Revenue Gap for FY06

1. The revenue gap for GESCOM with existing tariff is given below;

Table-7.15

Revenue Gap at existing tariff in GESCOM for FY06

(Rs crores)

Particulars	As per ERC filing of GESCOM	As approved by KERC
Total expenditure including return	1424.53	1246.70
LESS : Other income	4.80	4.80
Net revenue requirement	1419.73	1241.90
Revenue from sale of power (net of rural rebate)	757.05	757.05
Surplus/(Deficit) before subsidy	-662.68	-484.85

2. The revenue gap of GESCOM in FY06 at the existing tariff, before Government subsidy is estimated to be Rs.484.85 Crs. However, considering an additional sale of 400 MU, there will be an additional revenue of Rs.142.52 Crs.