Applications of Karnataka Power Transmission Corporation Ltd., (KPTCL) for approval of the Expected Revenue from Charges (ERC) Filing and the Tariff Filing for the year 2000-01

Present:
Shri Philipose Matthai Chairman
Shri H R Gopal Member
Smt. Nalini M K Menon Member

Karnataka Power Transmission Corporation Ltd., Applicant

O R D E R

This order deals with the applications made by the Karnataka Power Transmission Corporation Ltd., (KPTCL) a Licensee in terms of the provisions of the Karnataka Electricity Reform (KER) Act, 1999, seeking the approval of the Commission for its ERC Filing and Tariff Filing for the year 2000-01. The filings submitted to the Commission by KPTCL were revised twice and the third and final filing was submitted on 20.09.2000. The details of the filings are given below :

Filing	Date
First	06.07.2000
Revised	17.08.2000
Re-revised	20.09.2000

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Background to the present Applications

1. Karnataka's Power Scenario

1.1.1. Key Players

The two major entities in the Power Sector in Karnataka till recently were the Karnataka Electricity Board (KEB), established in the year 1957, and the Karnataka Power Corporation Limited (KPCL) set up in the year 1970. While KPCL has established generating plants and has been generating power, KEB's operations have been largely confined to the transmission and distribution of electricity. Karnataka has, thus, been a pioneer in the country in unbundling of the Electricity Sector. One of the main objectives of separating generation by setting up the KPCL was for accessing finances from outside the Government. However, as things turned out this objective was not achieved till 1995 when, at last, KPCL was able to tap financial institutions and banks for project financing.

2. Capacity Addition

KPCL has been adding to the power generation capacity of the State's grid since its inception. However the growth of demand for electricity has outstripped capacity additions because of rapid industrialization, increase in agricultural loads and urbanization. The State has been consistently experiencing significant energy and peak demand shortages since early 70's. The State power sector was predominantly hydro based till 1985. The steady growth in demand over the years could not be met from hydro sources alone. Besides, hydro power is subject to the vagaries of the monsoon that results in uncertainty about power availability. Karnataka, therefore, found it necessary to set up thermal stations. The first two units of the Raichur Thermal Power Station were commissioned during 1985-86. The State has also been purchasing power from Central Thermal Stations as well as from neighbouring states to meet its demand. The following Table shows the generation capacity existing in the State as on 1.4.2000.

Table 1 : Generating Capacity as on 1.4.2000

Station	Capacity(MW)
I. KPCL Plants: 1. Sharavathi 2. Bhadra 3. Linganamakki 4. Nagjhari 5. Supa 6. Varahi & Mani Dam 7. Ghataprabha Dam PH 8. Kadra Dam PH 9. Kodasalli Dam PH 10. Others: **Total KPCL Hydro including** **Mini & Wind Project**: **Total KPCL Thermal**: **Total KPCL** **II. Total of VVNL Projects** **Total State Owned Power Stations** **III. Private Sector**: **i. Mini Hydros** **ii. Wind Energy:** **Total**	1035 39.2 55 825 100 239 32 150 120 12 **2607.60** **1260.00** **3867.20** **348.52** **4215.72** **71.65** **25.10** **96.75**
Grand Total	**4312.47**

3. **Hydro-Thermal Mix of Energy Generation**

   1. There has been a steady increase of thermal power electricity generation in the State. The table below shows the variation in hydro-thermal mix of the electrical energy available in the State over the years :

Table 2: Hydro-Thermal Mix

Sl no	Sources	94-95	95-96	96-97	97-98	98-99	99-00	00-01*(Est.)
1	Energy availability (MU)	19542	19612	18638	21593	22704	26117	28619
2	Hydel %	64	51	38	49	45	46	37
3	Thermal %	36	49	62	51	55	54	63

Source: Tariff Filing of KPTCL for 2000-01

2. The increasing share of thermal power in electricity generation in the State has led to a steady increase in the average cost of generated power. This is clear from the following table that shows the average cost of power generated by the Karnataka Power Corporation Ltd.:

Table 3: Average cost of Generated Power (Paise/Unit)

1994-1995	49.94
1995-1996	69.97
1996-1997	82.27
1997-1998	76.89
1998-1999	79.72
1999-2000	92.13
2000-2001	108.41

Source: Annual Accounts of KEB

3. The cost of power purchased from Central Generating Stations has also been increasing in line with increases in fuel prices. Since power from Central Generating Stations is entirely Thermal, this raises the average cost significantly.

4. Though Karnataka has been assessed as having a hydro power potential of more than 7700 MW, it appears unlikely that a substantial portion of the potential yet remaining to be exploited will be so done in the near future. This is because of environmental issues, resettlement problems and Inter-State river water disputes that have either prevented or slowed down progress on various projects. The cost of generation from even the hydro projects that are currently under implementation will be significantly higher than that of the older hydro projects. As far as thermal generation is concerned, the State is yet to clearly assess the various technology and fuel options available. There is therefore, no clarity as yet about the likely trends in the cost of generation or power purchase in the medium term. However, the various alternative sources now being considered all point to a steep rise in average power cost over the medium term caused by new plants coming in at substantially higher cost than that of present capacity. While finalizing the tariff structure for different categories of consumers, the Commission has been conscious of the need to keep the likely medium term trend in view. In the Commission's opinion, it would have been ideal if the KPTCL had itself given some indication of this trend and had discussed how, in its view, the tariff increases in future years would have to be calibrated. Tariffs approved by the Commission remain in force until they are revised. The Commission cannot look only at projections of revenue requirement upto the end of the current financial year while determining tariffs. Any significant changes in the next financial year that would impact upon tariffs would also have to be taken into consideration. However, the KPTCL has not provided any such perspective. In the absence of any indication from the KPTCL, the Commission has been forced to make its own assessment on the basis of available material.

4. **Consumption of Irrigation Pump sets**

1. Karnataka has been following, for the past several years, an aggressive policy of energizing Irrigation Pump (IP) sets. The official statistics of energized IP sets over the past several years is given in the table below:

Table 4: IP Set population

(Figures are as of 31st March for each of the following years)

Year	Numbers
1975	2,05,644
1980	2,86,114
1985	4,33,607
1990	6,63,490
1991	7,33,097
1992	8,05,408
1993	8,57,513
1994	9,04,881
1995	9,60,165
1996	10,01,209
1997	10,35,240
1998	10,67,032
1999	11,25,933

2000	11,65,465

(Source: Annual Accounts of KEB for various years)

2. All IP sets in Karnataka were metered till 1981. Meters for IP sets upto and including 10 HP capacity were removed in 1981 and the tariff was charged on a flat rate basis thereafter. The tariff charged at various points of time is shown in the Table below:

Table 5 : IP set Tariff (for IP sets upto 10 HP)

Year	Tariff
1971	11 paise/unit
1974	15 paise/unit plus Rs.10/month
1978	23 paise per unit subject to a minimum of Rs.60/HP per year.
1981	Rs.50/HP/annum
1990	Rs.90/HP/annum upto 5 HP Rs.130/HP/annum from 5 HP to 10 HP
1992	Nil
1996	Rs.100 per HP per annum
1997	Rs.300 per HP per annum

3. Since the mid 90's, cases of unauthorized connections have been reported. KEB could not meet the steadily increasing demand for IP set connections. There was a long waiting list of IP sets that had to be energized according to the policies of the Government regarding prioritising of applicants. This backlog, coupled with the zero tariff, seems to have encouraged unauthorized connections. Strict action to disconnect these installations has not been taken. In fact, opportunities towards regularizing them have been given and the deadlines have been repeatedly extended. The situation continues to be the same even now. There has been no deterrent action against these unauthorized connections.

4. This inconsistent policy devoid of any economic rationale has had the following consequences:

1. The KPTCL has not been able to estimate with reasonable accuracy the figures for its Transmission and Distribution Losses. A part of the problem of estimation is caused by the KPTCL not having meters at various levels of transmission and distribution network. Estimation of Distribution losses specifically has been made very difficult by non-metering of IP sets,

Bhagya Jyothi installations and streetlights. The estimation of consumption of unmetered IP sets, Bhagyajyothi and streetlights is anything but accurate. The T&D loss figures calculated on the basis of these estimates have been questioned. This has resulted in accusations that the KPTCL has been shifting consumption from IP sets to T&D losses and vice versa in an arbitrary and baseless fashion playing with numbers in an illogical manner.

2. At the present tariff for IP sets, the KPTCL incurs a huge subsidy in IP set supply. For example, in the current year 2000-01, this subsidy is estimated at over Rs.1800 crores. Government of Karnataka have been providing only a part of this subsidy to the KPTCL. Consequently, the KPTCL has been attempting to meet the gap by enforcing cross subsidy on other consumers, especially HT industrial consumers. This has resulted in imbalance in tariff structure. Coupled with the shortages of power and unreliability of KEB supply, HT industrial consumers have found it worthwhile to switch over to captive generation. The base for cross subsidization has, therefore, steadily contracted.
3. KEB was required to earn a minimum surplus of 3% of the value of its net fixed assets at the beginning of the year. Till the year 1999-2000 the KEB was showing the gap in its resources to meet the 3% return as subsidy due from the Government. By and large this subsidy amount has also been made available by the Government, partly in cash and partly by way of adjustment of the dues from KEB to the Government. Out of the subsidy due from Government of over Rs.3800 crores pertaining to the years 1994-95 to 1999-2000 a sum of only Rs.538 crores remains outstanding from the Government to the KEB as of 31.3.2000. However, it appears as if the situation has now reached a level where this practice of cross subsidization and the gap to be filled by Government has become impossible. According to the ERC and Tariff Filing that are now being decided, the gap in the current year is Rs.1420 crores. Even if the revision in tariff were to be available for a full year there would still be a gap of Rs.609 crores. Government of Karnataka have so far not indicated their willingness to fund this gap. If the Government does not fill this gap, the KPTCL's accounts will, for the first time, show that the stipulated return of 3% is not being earned.
4. The amount levied on IP sets is also not recovered fully. In the year 1999-2000, the collection was Rs.75.50 crores against the demand of Rs.194.92 crores i.e. the percentage of collection was 38.73.

5. It is clear, therefore, that the IP set tariff policy followed so far is not sustainable.

6. The Commission, right since its inception, has been working closely with the KPTCL to systematize and upgrade the methodology for estimation of IP sets consumption. Later paragraphs of the Order will deal with this matter at length and explain the basis for the estimates finally used by the Commission.

3. Transmission & Distribution (T&D) Losses

Insufficient investment in the Transmission and Distribution networks has caused high transmission and distribution losses in the State energy sector. It has also become difficult to establish the quantity of the T & D losses since less than 40% of the energy distributed in the State is metered. The KPTCL has been estimating the T & D Losses based on the estimated consumption of un-metered consumers. The T&D Loss as estimated by the KPTCL has varied from 18% to over 38% over the years. Since both un-metered consumption and losses are estimated based on one another, the reliability of these figures is suspect. The T&D losses for the previous ten years as computed by the KEB / KPTCL is given below :

Table 6 : T&D Losses

Year	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
% Loss	19.48	18.91	18.70	18.60	18.60	18.50	18.48	18.56	30.19	38.00

Source: Annual Accounts of the KEB for the respective years

4. **Tariff Distortions:**

   The current tariff structure of the KPTCL is built on industrial and commercial customers subsidizing other categories such as IP sets, domestic, AEH customers etc. The KPTCL has itself realized that this cross subsidization has been carried to such an extent that industrial consumers have moved away from the grid and set up their captive generation capacity and the trend is continuing. The Commission is of the view that the current distorted tariff structure has to be rebalanced; however this can be achieved only over a period of time due to several reasons. The Commission has to ensure that no category of consumers is subject to steep increases at one go. Besides, detailed studies have to be commissioned to determine the cost of service applicable to various categories of consumers. The Commission also has to bear in mind the impact of such rationalization on the finances of the licensee. These factors are being highlighted in the present context in order to show that the Commission, while being conscious of the present distorted structure of tariff, has limited room for manoeuvre in the present tariff order.

5. The foregoing discussion shows that the following aspects of the KPTCL's position will be important determinants for tariff determination by the Commission.

1. Increases in average tariff in the medium term are inevitable.
2. In the process of rationalizing the tariff structure, tariffs for certain categories of consumers are likely to go up by more than the increase in average tariffs; while considering such increases, percentages would not give a proper picture since some tariffs are at very low levels at present.
3. The Tariff order will have to provide indications about efficiency standards that will have to be achieved by the utility, especially in the all-important T&D losses area.
4. Setting right the finances of the KPTCL will have to be accompanied by tangible improvements in the quality of service provided by the licensee so that the increases in tariff that will inevitably result will be rendered more acceptable to the consumer.

1.2 Karnataka Power Sector Reforms

1.2.1 The Government of Karnataka announced a Reform Policy for the Energy Sector vide its order dated 30.1.1997. The reform of the Power Sector, according to the policy statement, was designed to achieve the following objectives:

1. Attracting private investment to this Sector, in generation, transmission and distribution to meet the growing demand for power;
2. Establishing a regulatory environment that would ensure that generation costs are kept to a minimum through a process of competitive bidding for addition to capacity and that would also ensure that adequate incentives are provided for improvements in operational efficiency, cost reduction and enhancement in the quality of customer service in the transmission and distribution sectors.
3. Providing incentives for energy conservation;
4. Releasing scarce Government resources that are now required by the power sector for being used in areas of greater priority (i.e., where Private Investors would not be available).

2. The Reform process, as envisaged in the Policy Statement involved unbundling of transmission from distribution, with the distribution function being organized into several economically viable units. The policy also provided for the

setting up of an independent Regulatory Commission which would introduce necessary modifications in the tariff structure so as to progressively reduce cross subsidies and ultimately eliminate them. The Policy Statement specifically mentions that to the extent small rural consumers and the rural poor need to be protected, cross subsidies might have to continue in the retail tariff structure in the short to medium term; however, these would have to be gradually eliminated. The statement also emphasises the need to provide proper incentives in the tariff for supporting a programme of Demand Side Management and electricity conservation.

3. In terms of the Policy, the Karnataka Legislature enacted the Karnataka Electricity Reform Act, 1999, in terms of which the Electricity Regulatory Commission has been set up. In terms of the KER Act, 1999, the Government of Karnataka also issued provisional licences to the KPTCL in exercise of the powers vested in the Government under Section 18(4) of the Act. These Licenses were issued for Transmission and Bulk Supply and for Distribution and Retail Supply. Subsequently the KPTCL had also made applications to the Commission for issue of Regular Licences by the Commission. The Transmission and Supply Licences have been issued to the KPTCL on 6.12.2000 and 7.12.2000 respectively.
4. Government of Karnataka have also issued an order dated 27.1.2000 clearly declaring their policy on inviting Private Sector participation in Power Distribution in the State.
5. **Transfer Scheme and Notification**

The Corporatisation and reorganization of Karnataka Electricity Board as per the reforms policy envisaged unbundling of generation, transmission and distribution activities. On 16.7.1999, the Government of Karnataka approved the incorporation of Visvesvaraya Vidyut Nigama Limited (VVNL) and Karnataka Power Transmission Corporation Limited (KPTCL) for taking over the generation, and transmission and distribution activity respectively in the State of Karnataka. The transfer scheme of the assets and liabilities and personnel of erstwhile Karnataka Electricity Board to the two newly formed entities was notified on 30th March, 2000. As per the scheme, all the assets, liabilities and all matters relating to the Board were transferred to the State in consideration of all loans, subventions and obligations of the Board towards the State, in full and final settlement. The assets and liabilities so received by the State were classified into generation undertaking and transmission & distribution undertaking. The Government prepared provisional balance sheets for the two new entities, as at the effective date of first date of transfer of assets and liabilities and the generation undertaking and transmission and distribution undertaking have been transferred to VVNL and KPTCL respectively with effect from 1.4.2000. The personnel of the erstwhile Karnataka Electricity Board were also transferred and allocated to the services of the KPTCL or VVNL. The manner in which the personnel were to be transferred was given in the above-mentioned notification.

1.3 Karnataka Electricity Reform Act, 1999 – some relevant provisions

1.3.1 Definition of "Tariff":

Explanation (b) under Section 27 of the KER Act, 1999, says that "tariff" means a schedule of standard prices or charges for specified services, which are applicable to all such specified services provided to the type of customers specified in the tariff published. According to the provisions of Sub-Section (1) of Section 27, the holder of each licence granted under the Act shall observe the methodologies and procedures specified by the Commission from time to time in calculating the Expected Revenue from Charges which it is permitted to recover pursuant to the terms of its licence and in designing tariffs to collect such revenues.

2. **Power of Tariff Determination :**

Section 11 of the KER Act, 1999, lays down the functions of the Commission. As per Clause (a) of Sub-Section (1) of this Section, the Commission is responsible to regulate the purchase of power, distribution, supply and utilization of electricity, the quality of service, the tariff and charges, keeping in view the interest of consumers as well as the consideration that the supply and distribution of electricity cannot be maintained unless the charges for electricity supplied are adequately levied and duly collected. Section 11 enjoins the Commission to promote efficiency, economy and safety in the use of electricity apart from promotion of quality, continuity and reliability of service.

3. Guidelines for Determination of Tariff

1. As per Sub-Section (2) of Section 27 of the KER Act, 1999, the Commission has the power to lay down the methodology and terms and conditions for determination of revenue of the licensee and the determination of tariff in such a manner as the Commission considers appropriate. The Commission is to be guided by the following factors, namely: -

a. The financial principles and their applications provided in sections 46, 57 and 57A of the Electricity (Supply) Act 1948 (54 of 1948) and the sixth schedule thereto;
b. In the case of the Board or its successor entities, the principles under section 59 of the Electricity Supply Act 1948;
c. That the tariff progressively reflects the cost of supply of electricity at an adequate and improving level of efficiency;
d. The factors which would encourage efficiency, economical use of the resources, good performance and optimum investments and other matters which the Commission considers appropriate for the purpose of this Act;
e. The interest of the consumers are safeguarded and at the same time, the consumers pay for the use of electricity in a reasonable manner based on the average cost of supply of energy;
f. The electricity generation, transmission, distribution and supply are conducted on commercial principles;
g. National and State power plans formulated by the Central or State Government as the case may be.

2. Sub-Section (5) of Section 27 says that any tariff implemented under the Act shall not show undue preference to any consumer of electricity, but may differentiate according to the consumer's load factor, power factor and total consumption of energy during any specified period or the time at which the supply is required or the geographical position of any area, the nature of the supply and the purpose for which the supply is required or paying capacity of the consumers and need for cross subsidization. It shall be just and reasonable and be such as to promote economic efficiency in the supply and consumption of electricity; and shall satisfy all other relevant provisions of the Act, regulations and conditions of the Licence. Sub-Section (6) of Section 27 further lays down that the Commission shall endeavour to fix tariff in such a manner that as far as possible similarly placed consumers in different areas pay similar tariff.

1.3.4 Government's Power to issue Policy Directives

Section 12 of the KER Act 1999 specifies the power of the State Government to issue policy directives on matters concerning electricity in the State including overall planning and co-ordination. The policy directives given by the Government have to be consistent with the objectives sought to be achieved by the Act. In case the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the Commission, the State Government shall pay the amount to compensate the person affected by the grant of subsidy in the manner the Commission may direct as a condition for the licensee or any other person to implement the subsidy provided for by the State.

1.3.5 Salient Features of the KERC (Tariff) Regulations, 2000:

1. Section 27(1) of KER Act, 1999 requires that the each Licence holder has to observe the methodologies and procedures specified by the Commission from time to time in calculating the expected revenue from charges (ERC) which it is permitted to recover and in designing a suitable tariff system for this purpose. The licence holder will have to provide full details of the calculations of the expected earning for the ensuing financial year from charges which it is permitted to recover for supplying electrical energy to consumers. Based on this provision, the Commission has framed Regulations for furnishing details regarding filing of expected revenue from charges and proposed tariffs by the licensees. The objectives of the Commission in framing Tariff Regulations were:

a. To inform licensees of the basic minimum data and information requirements for seeking the Commission's approval to the expected revenue from charges and for any proposal for modification of the tariffs.
b. To provide standardized formats in which such information is to be provided.
c. To specify the procedure by which the Commission would take up the ERC filings and Tariff filings for consideration before according its approval thereto.
d. To ensure the greatest possible transparency in such procedure and the fullest possible opportunity for all concerned to participate in such a process.

2. The information that is to be furnished by the licensee includes consumer category-wise energy demand projections, sources of supplying the energy, cost of energy and break up of expenses proposed to be incurred for supplying the energy to the consumers, total capital employed to provide the service, total revenue requirement including return on investment and proposed tariff for different categories of consumers to meet the total revenue requirement. This information in detail relating to Expected Revenue from Charges is to be furnished to the Commission in the prescribed format not later than four months prior to the beginning of a financial year. No specific date for the tariff filing has been prescribed. The only requirement is that this should be filed at least three months before the implementation date. The Commission on receipt of ERC and tariff filing by the licensee can notify the licensee for any additional information and clarification required within fifteen days and also specify dates by which such information/clarifications are to be furnished. On receipt of all information the Commission would treat the filings of the licensee as a petition before it. The ERC filing and/or Tariff filing would then be published by the licensee in daily newspapers in the format as approved by the Commission. The responses of the consumers to the publication and the replies by the licensee would be considered by the Commission while passing Orders on the filings.

KPTCL'S Expected Revenue from Charges and Tariff Filings and Consumer objections

1. **ERC and Tariff Filings:**

2.1.1 KPTCL lodged its Expected Revenue from Charges (ERC) and Tariff filings on 6.7.2000 with the Commission. There has been an objection from Shri Ramadas, MLA, that the filings were delayed since the ERC filing was made well after the commencement of the financial year instead of at least four months before the financial year as required under the Tariff Regulations. The Commission notes that this is the first year since the Act came into operation and the Commission was set up. The procedures of regulatory approval for the ERC and Tariffs are new both for the licensee as well as the Commission. The delay, therefore, in the Commission's opinion is to be condoned.

2. **Hearing by the Commission**

1. The Commission took up the examination of ERC and Tariff filing immediately. The Commission noticed the incompleteness of the filings and KPTCL's request for waiver of the requirement of filing certain information, as it was unable to furnish all the information as prescribed under the KERC (Tariff) Regulations, 2000. The Commission posted the matter for hearing on 28.7.2000 in order to examine in detail the difficulties expressed by KPTCL in complying with the filing requirements. In the hearing on 28.7.2000, KPTCL was informed that its plea about non-availability of data regarding transmission and distribution activities separately was not, prima facie, acceptable since the same was being provided on a regular basis in the Annual Accounts of the erstwhile KEB. As far as other data requirements were concerned, KPTCL was advised to make the best possible efforts to furnish the same.

2. The Chairman, KPTCL, while admitting the incompleteness of the filings, submitted that he would furnish the details in ten days' time and would also make honest efforts to improve the accuracy of the data already furnished. The Commission granted the request. The KPTCL lodged its revised filings with the Commission on 17.8.2000.

2.1.3. Validation by the Commission

1. Pending the lodging of the revised filing, the Commission held a series of meetings with the senior officers of KPTCL to elicit and validate the information furnished in the ERC and tariff filings on the dates and subjects given below:

Table – 7 : Date and Subjects of the Meeting

Date	Subject
10.08.2000	Capital expenditure and capital works commissioned
11.08.2000	T&D losses, IP set consumption
17.08.2000	Investment plan, cost-benefit analysis, metering policy, delays in completion of capital works, provision of capacitor banks, accounting of consumers contribution towards service connection, status of computerization, replacement of power and distribution transformers and analysis of reasons for failure, power evacuation from generating stations, discrepancies in loan amount drawn compared to estimated cost, details of Rural Electrification Corporation (REC) schemes.
23.08.2000	1. **Cost of power purchased** - fixed and variable charges; details of hydro and thermal units; tariff of RTPS-1-4 units & RTPS-5 unit; fuel escalation charges payable to power suppliers and receivable from consumers; analysis of power purchase projections; two part tariff in respect of Central Generating Stations; scope for drawal of power from Damodar Valley Corporation; review of cost structure of IPPs; power purchase from co-generation units; cost details of power purchase from VVNL; details of the concessional rate of Rs.3.25/KWH to HT category; details of T&D losses based on studies conducted. 2. **Billing & collection efficiency** – age-wise analysis of arrears; arrears from Government installations; issuance of notices of disconnection in case of non-payment of dues; review of arrears in respect of other categories of consumers and alternate ways of recovery of arrears, load factor; average consumption in respect of certain category of consumers, especially in LT-1b, LT-2, LT-3 & LT-5; subsidy given to solar

	water heaters; test reports to be cleared by KPTCL; provision of Government subsidy for the year 2000-01.
28.08.2000	**Employee costs & other expenses and non-tariff income** – details of employee cost of 1999-2000 and 2000-01; provision for payment of terminal benefits to employees, manpower planning policy; creation of new posts during last two years and improvement in the efficiency due to filling up of such additional posts; details of non-tariff income; position regarding wheeling charges; details regarding provision for professional charges, conveyance and travelling charges and electricity and water charges for 2000-01; accounting of consumption and transformer losses in Master Unit Sub Station (MUSS); repairs and maintenance expenditure of buildings for the year 2000-01; schedule of drawal and interest details for 2000-01.
09.09.2000	Proposal regarding the levy of meter hire on domestic / commercial category; full details of fuel escalation charge and its merger in the basic tariff; formula of passing fuel escalation charge to consumers; time schedule for filing objections by the consumers; making available the copies of ERC / tariff filing as per KERC Tariff Regulations; points to be released in draft advertisement

2. KPTCL progressively supplied most of the additional information required by the Commission in the above-mentioned meetings.

2.1.4 Authorization for Publication

Though the information furnished by the KPTCL was not up to the standards of accuracy and reliability that the Commission would have liked to insist on, the Commission recognized that, this being the first year, all the information required would not be readily available with KPTCL and agreed to go ahead with the publication of the filings. This decision of the Commission was based essentially on pragmatic grounds as no progress would have been achieved if the Commission were to insist on perfection. The Commission will, however, be giving detailed guidelines separately for ensuring that the short comings noticed in the first filing are remedied. KPTCL will have to comply scrupulously with these guidelines. The ERC and Tariff filings were cleared by the Commission for publication by KPTCL on 20.9.2000. The publications appeared in four English daily news papers (Deccan Hearld, Indian Express, Times of India and Hindu) and four Kannada daily news papers (Prajavani, Udayavani, Samyukta Karnataka and Vijaya Karnataka) on 29.9.2000 and 30.9.2000 inviting public objections and representations and indicating the procedure to be followed in filing the objections and representations. The last date fixed for filing the objections and representations by the public was 14.11.2000 (i.e., on completion of 30 working days from the date of first publication of the advertisement)

1. **Objections Received from consumers:**

2.2.1 1. The KERC (Tariff) Regulations, 2000, require that interested persons file their objections and such documents as they seek to rely upon, supported by an affidavit, in six copies, and also indicate whether they would like to be heard in person by the Commission. While this was the requirement in case an objector desired to be impleaded as a party to the proceedings, the Commission also recognized that there would be a large body of consumers who might not wish to be formally impleaded as parties to the proceedings but might, nevertheless, wish to have their point of view heard. The Commission, therefore, also issued a press notification indicating that even those objection petitions not in strict conformity to the procedures specified in the notification would be duly taken into account by the Commission. The abstract of the objection petitions received in the Commission is given below

Table – 8 : Details of Objection Petitions

Sl No.	Details of Objection Petitions	Nos.
1	Objection petitions supported by affidavits.	110
2	Objection petitions not supported by affidavits.	122
3	Total objection petitions	232

2. The Commission directed KPTCL to furnish individual replies to all the objection petitions supported by affidavits and posted the objection petitions received in the prescribed format for hearing. A list of the names and addresses of the objection petitioners who filed affidavits in support of their petitions is included in **Annex 1** to this Order. The summary of the objections filed by all these petitioners is included in **Annex 2** to this Order. The Commission's views on the substantive issued raised by the objection petitioners, after duly considering the KPTCL's rejoinders thereto, have been included at appropriate places in the body of the Order.

2. **Summary of the petitions:**

1. The points raised in the objection petitions covered the entire gamut of matters included in the ERC and Tariff filings. While the Commission has gone through every objection petition in detail and KPTCL's rejoinder thereto, and has also subsequently heard those objectors who were present at the hearing, practical considerations do not permit individual treatment of each objection petition, the KPTCL's response and the Commission's decision thereon in the course of this order. In this order, the Commission will be discussing the salient features of all objections at appropriate context and expressing its views instead of examining each individual objection as it will be too elaborate and repetitive an exercise.

2. One of the preliminary objections raised was that there was no documentary evidence produced that the ERC and Tariff filings had been approved by the Board of Directors of the KPTCL and that the Chief Engineer (Regulatory Affairs) of the KPTCL was not duly authorized to sign and submit the same. The Commission notes that the ERC filing says that the same has been discussed and approved by the Board of Directors of the licensee. Similarly, the Tariff filing says that the proposed Tariff structure has been duly discussed by the Board of Directors of the licensee. The Commission has also perused the KPTCL order Board No.KPTCL/B25/2938/99-2000 dated 3.8.2000 under which the Chief Engineer (Electricity) Regulatory Commission or any other officers authorized by CMD from time to time have been authorized to receive all notices, sign all the papers and pleadings etc., to be filed before the Commission on behalf of KPTCL. It is a settled principle of Company Law that the Indoor Management of a Company is not a matter in to which an outsider dealing with the Company needs to go. The Commission also notes that as per Sub-regulation (5) of Regulation 3 of the KERC (Tariff) Regulations, 2000, provide that the ERC filing is to be signed by an authorized officer of the licensee who shall be responsible for verifying and certifying the correctness thereof. The Commission is satisfied that the Chief Engineer (Regulatory Affairs), KPTCL has been duly authorized to sign the filings and that there is no legal infirmity on this score.

3. Public Hearings

1. Section 27 of the Act dealing with Tariffs does not lay down any specific procedure for throwing open the application of the licensee for public objections or for any other method to be used in order to ascertain the views of the consumers at large. Sub-Section (9) of the said section only requires the supply licensee to publish in a daily newspaper and also make available to the public on request the tariff for the supply of the electricity and provides that such tariff shall take effect only after 7 days from the date of publication. Sub-Section (7) of Section 10 of the Act provides that in the discharge of its functions the Commission shall be entitled to and shall consult, to the extent the Commission considers appropriate from time to time, such persons or groups of persons who may be affected or are likely to be affected by the decision of the Commission. Clause (a) of Sub-Section (2) of Section 9 provides that the Commission shall have the exclusive power to make regulations for the conduct of its proceedings and discharge of its functions and all such regulations made shall be notified.

2. Regulation 5(1)(a) of the KERC (Tariff) Regulations, 2000, provides that the summary of a petition relating to ERC or Tariff approval should be published giving an opportunity for interested persons to file their objections.

3. Clause (2) of Regulation 26 of the KERC (General and Conduct of Proceedings) Regulations, 2000, provides that where a person has filed objections or comments in regard to a matter pending before the Commission, pursuant to the advertisement or publication issued for the purpose, the Commission may permit such persons or persons as it may consider appropriate to participate in the proceedings before the Commission. Clause (3) of the said Regulation further provides that unless permitted by the Commission, the person filing objections or comments shall not be entitled to participate in the proceedings. However, the Commission shall be at liberty to take into account the objections and comments filed after giving such opportunity to the parties in the proceedings as the Commission considers appropriate to deal with the objections and comments.

4. Accordingly, the Commission decided to give an opportunity to all objectors who had filed their objections duly supported by affidavits as required by sub-clause (a) of clause (1) of Regulation 5 of the KERC (Tariff) Regulations, 2000, to appear before the Commission for a hearing in order to advance their oral arguments. The applicant, KPTCL, was also required to provide written replies to each of such objectors, in advance, before the date of hearing. KPTCL has provided the replies as directed by the Commission. At the hearing, the objectors were permitted to present arguments in amplification of the points made in their objection petition as also in response to the reply provided by KPTCL. All other objectors who did not follow the prescribed procedure and had not submitted an affidavit in support of their contentions were informed through a press release that while they would not be entitled to participate in the proceedings and address oral arguments, their views would be duly considered by the Commission and taken note of. The Commission has, accordingly, gone through, in detail, the objections that were not supported by affidavits and has duly taken note of all the points raised by the objectors.

5. The objection petitions supported by affidavits received from different parts of the State were classified for the purpose of hearings into three groups based on the location of the petitioner. Details of the location of petitioner, grouping and the date of hearing are given below:

Table – 9 : Details of Hearing of Objection Petitions

Group.No.	Hearing Location	Date of hearing & No.of petitions	Locations Included & No.of petitions
I	Bangalore	27.11.2000 (29) 30.11.2000 (24) 01.12.2000 (18)	Bangalore (58) Tumkur (5) Kolar (2) Challakere (1) Mysore (3) Chamarajanagar (1) Arasikere (1)
II	Mangalore	28.11.2000 (12) 29.11.2000 (10)	Mangalore (20) Coorg (1) Chickmagalur (1)
III	Dharwad	04.12.2000 (17)	Hubli (1) Belgaum (8) North Kanara (4) Gadag (1) Koppal (1) Haveri (2)

6. One of the objectors who was permitted to participate in the hearing at Bangalore made a request for the recording of evidence at the hearing and also for cross examining KPTCL officers. Subsequent to the hearing, the objector has also filed a letter with the Commission repeating the request to permit cross-examination of KPTCL officers. As explained above, the procedure followed by the Commission in this whole process of ascertaining the views of consumers on the ERC and tariff filings is entirely in accordance with the provisions of the KER Act, 1999, and the Regulations framed thereunder. These proceedings are not the equivalent of proceedings before a trial court where evidence is recorded. Besides, the facts stated by the KPTCL in the filings are all facts as extracted from the records of the KPTCL and are not matters of exclusive personal knowledge of the deponents and therefore any question of cross examination of the deponents does not arise. The Commission has, in the course of looking into the facts as asserted by the KPTCL as well as the objectors, looked into such records as, in its opinion, were necessary for a proper conclusion about the issues covered thereby. The Commission, therefore, does not see any justification in the request of the objector concerned about either recording of evidence afresh or about permitting KPTCL officers to be cross examined. The entire hearing has been recorded on audio and video tapes.

2.2.4 Consultation with the Commission Advisory Committee

The KPTCL Tariff proposals were placed before the Commission Advisory Committee at a meeting held on 24.11.2000. The summary of the recommendations of various members of the Commission Advisory Committee is as follows :

1. KPTCL's figures of T&D losses are not convincing and do not appear to be backed by any data. Tariff increases should therefore not result in KPTCL's inefficiencies in the matter of T&D losses being passed on to consumers. Similarly, the Commission should also look into the rates at which power is purchased from the KPCL so that tight performance standards are imposed on the KPCL while fixing their tariffs for supply to KPTCL.
2.
3. While subsidies could be granted to any categories of consumers based on the decisions of Government, the entire subsidy on account of these decisions should be borne only by the Government. Other categories of consumers should not be burdened with cross subsidies.
4. Metering of all consumers including agricultural consumers is absolutely essential.
5. Agriculture should not be treated unfavorably compared to industry.
6. Paying capacity of consumers should be an important factor in determining tariffs. Farmers who have the paying capacity should be required to pay for the cost of supply of electricity. The assessment of paying capacity of farmers is possible by several methods –
   a. The same criteria as used for identifying small and medium farmers for other subsidy schemes could be adopted.
   b. Subsidy can be restricted to certain maximum consumption (number of units per month) once meters are fixed and all consumption above this level should be charged in full.
1. The Commission should look into linking tariff to the quality of supply.
2. Industrial tariffs should be on par with other southern States so as to render industry competitive.
3. Tariffs should also provide incentives for demand side management.

General Principles

Statutory provisions

3.1.1 Guidelines under Section 27(2) of the KER Act, 1999

1. The statutory provisions given in Section 27(1) of the KER Act, 1999, state that [1] the licensee shall observe the methodologies and procedures specified by the Commission from time to time in calculating the expected revenue from charges which it is permitted to recover pursuant to the terms of its licence and in designing the tariffs to collect such revenues. [2] The Commission shall have the power to lay down methodologies and the terms and conditions for determination of revenues of the licensee and determination of tariff in such other manner as the Commission considers appropriate and for doing so, the Commission shall be guided by the factors listed in Sub-Section (2) of Section 27.

2. Section 27(2)(b) of KER Act, 1999 states that in the case of Electricity Board or its successor entities the principles under Section 59 of the Electricity (Supply) Act, 1948, will apply. Sub-Section (5) of Section 13 of the KER Act lays down that upon the grant of licence to the KPTCL under Chapter VII of the Act, the KPTCL shall discharge such powers, duties and functions of the Board including those under the Indian Electricity Act, 1910, and the Electricity (Supply) Act, 1948, or the rules framed there under as may be specified in the licence, and it shall be the obligation of the KPTCL to undertake and duly discharge the powers, duties and functions so assigned. Sub-Section (1) of Section 14 of the Act provides for vesting the property, rights and liabilities of the KPTCL in the Government and Sub-Section (2) of the same Section provides for revesting any part of such property, rights and liabilities etc., in the KPTCL or any Generating Company or Companies in accordance with a transfer scheme. Accordingly, the Government of Karnataka have issued the Karnataka Electricity Reform (Transfer Scheme) Rules, 1999, with effect from 30th March, 2000. Under these Rules, the Transmission and Distribution undertakings of the erstwhile KEB have been transferred to the KPTCL. Sub-Rule (3) of Rule 5 of the said Rules provides that on such transfer, the KPTCL shall be responsible for all contracts, rights, deeds, schemes, bonds, agreements, arrangements or dealings and other instruments of whatever nature to which the Board was initially a party in the same manner as the Board was liable immediately before the effective date and the same shall be in force and effect against or in favour of the KPTCL and may be enforced effectively as if the KPTCL had been a party thereto instead of the Board.

3. These provisions in the Act and the Transfer Rules clearly show that KPTCL is indeed a successor entity of the Board and, as such, the Commission must be guided by Clause (b) of Sub-Section (2) of Section 27 of the Act. The Commission, therefore, informed KPTCL to this effect and KPTCL has also filed its proposals on the same basis.

3.1.2 Section 59 of the Electricity (Supply) Act, 1948

1. The general principles regarding the finances of Electricity Boards are given in Section 59 of the Electricity (Supply) Act, 1948. This Section states that the Board shall, after taking credit for any subvention from the State Government under Section 63, carry on its operation and adjust its tariff so as to ensure that the total revenues in any year of account shall, after meeting all expenses properly chargeable to revenues, including operating, maintenance and management expenses, taxes (if any) on income and profits, depreciation and interest payable on all debentures, bonds and loans, leave such surplus as is not less than 3 % or such higher percentage as the State Government may, by notification in the official gazette, specify in this behalf, of the value of the fixed assets of the Board in service at the beginning of such year. The value of fixed assets means the original cost of such fixed assets as reduced by the aggregate of the cumulative depreciation in respect of such assets calculated in accordance with the provisions of the Act and consumers contribution for service lines. The Government of Karnataka has not specified any higher percentage of surpluses for the purposes of Section 59 of the Electricity (Supply) Act.

2. On behalf of one of the objectors, M/s.Kudremukh Iron Ore Co. Ltd., (KIOCL), it was contended that –

i. The procedure for determination of the ERC in terms of the 6th Schedule to the Electricity (Supply) Act, 1948, is substantially different from that under Section 59 of the same Act.

ii. Section 59 is not applicable to the KPTCL as it is not a successor entity of the erstwhile KEB.

iii. Even assuming that KPTCL is a successor entity of the KEB and that Section 59 would be applicable, the present proposal of the KPTCL should be rejected outright since there would subsist a large gap even after the proposed tariff revision and therefore the 3% return prescribed under the Act would not be achieved.

3. As has been made clear in the above paragraphs, KPTCL is clearly a successor entity in law to the erstwhile KEB. As far as the need to compulsorily earn a 3% return on net fixed assets is concerned, the Commission notes that the various factors listed in Sub Section (2) of Section 27 of KER Act, 1999, are to be considered only as guidelines. That this is the correct construction of the said clauses is also evident from the fact that there could be several mismatches amongst various guidelines listed in Sub Section (2) and considering clause (b) as mandatory could lead to conflict with other clauses. Hence, what Sub Section (2) contemplates is, in the Commission's opinion, a judicious balancing of the various guidelines included in the said Sub Section so as to achieve the overall objectives of the Act. The Commission, therefore, does not find any substance in the argument of the KIOCL that the tariff proposal should be rejected outright as it does not disclose a 3% return even after the proposed tariff revision. As far as the point made by the KIOCL about there being a substantial difference between the 6th Schedule and Section 59 is concerned, the Commission feels that it does not need to go into this issue since the Commission has already clarified that sixth schedule would not apply.

2. Tariff Determination - Conceptual Issues

3.2.1 The Commission has considered various methods of tariff determination and analysed their impact on the incentives they provide to improve the efficiency of the licensee and the financial health of the Electricity Sector. A brief discussion of these issues is given below:

2. Rate of Return (ROR) Regulation, Performance Based Regulation (PBR) and Multi-Year Tariff Setting

1. ROR regulation refers to a system of regulation where all the costs incurred by a utility, together with a reasonable return on its investment, are allowed to be passed through to consumers by means of tariffs. PBR, on the contrary, is a system of regulation where the tariff that can be charged is linked to some performance standards. The utility gets a higher return than normal if it can improve its actual performance beyond the standards; it earns a lower return if its actual performance is below these standards. In the case of ROR regulation, it is said that such an incentive to improve performance does not exist as the utility is assured of its return irrespective of its actual performance levels. On the contrary, it is said to provide an incentive for "gilt-plating" capital expenditure since it is assured of returns on whatever capital investment it makes.

2. The Commission believes that the differences between ROR regulation and PBR that are highlighted in literature do not have bearing on practical assessment of revenue requirement and tariff determination at least at this point of time in our country. The ideal type of ROR regulation that is described in literature does not exist in practice. No scheme of ROR regulation can be entirely free of some norms or standards subject to which alone the revenue requirements of utilities are allowed. In this sense, the provisions of the 6th Schedule also must be understood as a form of PBR only since even this talks of allowing only expenditure that is "properly incurred".

3. In the Commission's opinion the practical consequences of the differences between ROR regulation and PBR that are highlighted lie in-

a. Whether there should be an annual review of the expenditure incurred by the licensee, its revenues and the rate of return earned thereby; and
b. Whether there should be an ex post correction of tariffs to restrict the actual return earned by the licensee to what is judged "reasonable".

4. The Commission has looked at these two issues in considerable detail. The Commission notes that in the multi-year tariff setting model that has been used in England, a baseline level of expenses that need to be properly incurred for delivering electricity is first established and some estimate of the requirements of expenditure, including of capital expenditure, for the tariff period is then made. The Utility is thereafter allowed to adjust its tariffs annually on the basis of some index of inflation and as reduced by a productivity improvement factor. This annual change in tariffs does not require any further approval from the Regulator. The tariffs are reset at the end of each tariff period in such a way as to pass on the efficiency gains achieved during that period through to the Customers in the next succeeding tariff period. There are two advantages that are said to arise from such a method:

1. Regulatory overheads in terms of the time and energy and staff resources that are spent both by the Regulator and by the Utility on an annual review of expenditure are reduced.
2. Since the utility has the scope for retaining gains in efficiency until the next tariff revision, this method has the merit of providing strong incentives for improvements in efficiency and also for reducing any tendency there may be to avoid passing on such information to the Regulator.

5. In the KPTCL's case, the Commission is of the opinion that multi year tariff setting is not advisable at the present juncture for the following reasons :

i. Base line data is either not available at all or is completely unreliable. The Regulator and the Utility will have to work closely and intensively for quite some time more before acceptable standards of data availability are achieved. Annual reviews and continuous interaction between the Regulator and the Utility and continuous monitoring will be required for some more time to come. The overheads on this exercise are, however productive, in terms of improving the quality of the database.

ii. The Commission has also not yet set up the standards that are necessary to operate a formula based tariff revision system. This would require instituting a number of detailed studies.

iii. Given Karnataka's Hydro-Thermal Mix and the significant volatility in hydro power availability that is possible, multi-year tariff setting on the basis of automatic adjustments according to a set formula would be difficult.

iv. Karnataka also faces the prospect of additional capacity coming in at substantially higher costs than the current average cost of supply. As explained in some of the earlier paragraphs, there is as yet no clarity about several aspects of the additions to capacity that are likely. A formula that will cover all these contingencies appears difficult.

v. As explained above, the Commission will be adopting norms for assessing the prudence or otherwise of expenditure. In this process certain minimum standards of efficiency will have to be achieved by the licensee. The Commission is conscious of the fact that this approach penalizes inefficiency compared to the norms but does not provide any incentive for improving efficiency beyond the norms. However, in the light of what has been explained above, the Commission is of the opinion that this is the best that can be attempted in the circumstances.

6. At the same time the Commission is aware of the advantages that a multi-year tariff setting methodology can provide to investors looking at the Distribution Sector in Karnataka as a potential investment option. The Commission will therefore be examining this issue in greater detail in order to balance the requirements of private players for greater certainty regarding their cash flows with the practical requirements of the present situation. At the same time, the Commission believes that the issue of Annual vs. Multi year tariff setting is only one of several issues that have a bearing on the financial health of the Sector and its attractiveness to private sector investors. In the Commission's opinion even more important than this are issues of how soon categories of consumers who are currently subsidized can be brought out of the subsidy net.

2. Historical Costs and Long Run Marginal Costs (LRMC)

Economic theory advocates the use of LRMC for tariff determination in order to ensure that the prices thus set are in conformity with requirements of economic efficiency. However, in a situation where there is not yet adequate clarity about how capacity is going to be added in the system, the Commission feels that historical cost based tariff setting would be the most appropriate method to follow. This opinion of the Commission is also reinforced by the fact that where there are several categories of consumers who are currently paying less than even the historically determined cost of supply, switching over to the LRMC principle for tariffs would cause such a sharp tariff shock as to be impractical.

3. **Cost of service**

1. Clause (c) of sub section (2) of Section 27 of KER Act says that one of the guidelines for the Commission is that the tariff should progressively reflect the ***cost of supply*** (emphasis added) of electricity at an adequate and improving level of efficiency.

2. The Commission notes that one of the basic principles that has been widely accepted in electricity sector regulation is that the tariffs for various categories of customers should be, as far as can be practicable, equal to the costs imposed by that category of customers on the system in order to supply them the electricity demanded by them. This is what is currently understood as ***cost of service.*** The methods advocated for computing the cost of service require that the cost of service be computed first by functionalisation of assets and expenditure, that is identifying assets and expenditure relatable to each of the functions of generation, transmission and distribution that are involved in the supply of electricity. As a second step, all these assets and expenditure are also required to be classified into the three categories of demand related, energy related and customer related assets and expenditure. While the allocation of energy related and customer related assets and expenditure amongst various customer classes is relatively easy, the allocation of demand related charges amongst customer classes is a more difficult exercise. This requires data regarding the demand pattern of various classes of customers at various times of the day and across the seasons in a year. Computation of cost of service would also require the Commission to take into account the present situation of power supply to the rural areas of the State being officially shut down for six hours each day. While allocating capacity related costs of generation and transmission to various categories of customers, this restriction placed on rural consumers would have to be taken into account. A further complexity is introduced into the situation by the present arrangements relating to power purchase cost. All power purchased by the KPTCL from the KPCL is on the basis of a single composite rate applied on the units purchased. As far as the Central Generating Stations are concerned, a fixed charge and a variable charge have indeed been identified. However, at present the fixed charge is also levied as if it were a variable charge. Computation of capacity related costs at present would, therefore, have to make a number of assumptions. The Commission notes that the Availability Based Tariff (ABT) order made by the Central Electricity Regulatory Commission (CERC) provides for switching over to a regular two-part tariff. Similarly, the KPCL has recently placed its tariff revision application before the Commission and has requested the Commission to fix a two-part tariff. As and when the revised tariff pattern is implemented, the computation of demand related charges would be facilitated.

3. Though the Commission had included a proforma for providing the details of embedded cost of service relatable to various classes of consumers (Form D 27). KPTCL in its filing has not been able to supply this information in the manner required. Form D-27 gives information about embedded cost of service at LT and HT levels. This is based on a total T&D loss of 36.5% of gross energy input. Of this, the HT loss shown works out to 20.96% while the LT loss works out to 15.54%. This is not corroborated by other data available with the Commission and is prima facie incorrect. It is therefore, not possible to accept even the voltage level-wise cost of supply furnished by the KPTCL.

4. The Commission, therefore, has not been able to proceed in the direction of estimating the cost of service for various customer classes in order to use the same as a basis for tariff determination. The Commission will be issuing directions separately to the KPTCL on conducting a full-fledged cost of service study and will also issue necessary guidelines about how the study is to be carried out. These studies will have to be carried out and completed well in advance of the next tariff filing. However, for the purpose of the present order, the Commission has based its rate structure on the average cost of supply of electricity as obtained by dividing the aggregate revenue requirement by the total quantum of power expected to be sold in the year 2000-01.

3.2.5 Fixed charges and energy charges

1. As explained above in the section relating to cost of service, the total cost incurred in the system can be divided into three categories i.e., demand related, energy related and customer related. While the demand related and customer related charges are invariable with reference to energy consumption, energy related charges are directly proportional to the quantum of power consumption. Rational tariffs would require that to the extent that there are fixed charges in the system that are to be incurred irrespective of whether any energy is consumed at all or not and are invariable with reference to the quantum of energy consumption, customers are also required to pay a certain fixed charge every month which does not depend upon the energy consumed by them. As has been noted in the section on cost of service, there are certain difficulties involved in estimating the total fixed charges in the KPTCL system at the moment. Nevertheless, certain clearly identified elements of fixed charges are included in the revenue requirement. These are related to items such as employee cost, repairs and maintenance cost, administrative and general expenses, depreciation, interest and financial charges as well as the rate of return required to be earned. The total of even these amounts as estimated for the year 2000-01 is Rs. 1752 crores. The fixed capacity related charges pertaining to power procurement are as yet not clearly identified. Even ignoring these amounts for the time being, it is clear that an amount of Rs.1,752 crores needs to be recovered from the consumers by way of a fixed component in the tariff.

2. Several objectors have raised a number of important points relating to levy of fixed charges in the tariff. The various objections of the consumers can be broadly classified as follows:-

i. Fixed charges for domestic consumers were first introduced in the 1980's purely as a temporary measure. However this has been continued ever since and has now become a permanent feature. This should now be removed since it was intended to be a temporary measure for raising funds for the then KEB.

ii. Even assuming that fixed charges are to be collected from consumers, this should be kept at the same level only and not increased. Objectors have stated that having once serviced the connection and having provided the meter etc. for that connection, there are no further fixed charges that are incurred by the licensee and therefore there should be no periodical increase.

iii. Some objectors have contended that the fixed charges in the tariff should be changed into a minimum charge in the sense that once energy consumption crosses a certain minimum level, the fixed charges should be absorbed in the variable charge. Some other objectors have also contended that the fixed charge in the tariff should be operated in a manner similar to the rental charges by the Telephones Department and that, corresponding to the fixed charge, a certain number of units of consumption should be given free.

iv. Some objectors have contended that the objective sought to be achieved by levy of fixed charges can as well be accomplished by a levy of a minimum charge.

3. The Commission has carefully considered all these objections. The Commission is of the opinion that these objections have been raised mainly because the KPTCL has not clarified to its consumers the exact nature of the cost that the fixed charges are designed to recover. In the tariff filing for the year 2000-01 the total amount that the KPTCL expects to recover by way of fixed charges in the tariff is Rs. 782.57 crores (prior to revision). Compared to even the amount of Rs.

1752 crores (excluding the capacity related cost of power purchased) that needs to be recovered, this amounts to a recovery of fixed cost though the fixed part of the tariff of only 45 per cent. In the light of the explanation given in the above paragraphs it is clear that the objections of many consumers would not stand once the concept of fixed charges as explained above is understood.

4. As far as the levy of minimum charges in such a manner as to accomplish the objective sought to be achieved by the levy of fixed charges is concerned, it is clear that this objection is based upon an incorrect appreciation of the said objective. As explained above, fixed charges, by definition, are invariant with reference to consumption. It is not as if the fixed charges payable by the licensee are in turn of the nature of minimum charges in that they get absorbed in the variable charges once a certain level of consumption is achieved. Levying the entire charges payable by a consumer purely as a variable charge would penalize customers with a high load factor while at the same time affording undue benefits to customers with a very low load factor. The levy of a fixed charge will also pave the way for a time-of-day usage tariff that will provide the right kind of signals for demand side management. The Commission is, therefore, not able to accept this argument.

5. There are some disadvantages in recovering the fixed cost entirely through the fixed part of the tariff. One issue is that once the utility is assured of recovery of its fixed cost completely irrespective of whether it sells any energy or not to a consumer, this could possibly lead to a neglect of customer service. The Commission has given its attention to this issue and has concluded that it would be appropriate if the tariff were progressively modified so as to eventually recover about two-thirds of the total fixed cost in the system through a fixed component in the tariff. Until this level is reached there would be a progressive increase in the fixed component of the tariff over the years with such reductions in the energy charge as may be required.

3.2.6 Cross subsidies

1. The Commission recognizes that quantification of the subsidy provided to any category of consumers would be, strictly speaking, dependent upon the cost of service to the consumer computed in the manner explained in the preceding section. Clause (a) of sub section (5) of Section 27 of the Act prohibits showing of any undue preference to any consumer of electricity. However, differentiation according to, inter alia, paying capacity of categories of consumers and the need for cross subsidization has been permitted.

2. In the absence of cost of service calculations, the Commission has attempted to obtain a broad picture of the cross subsidization pattern by comparison of existing average tariffs for various customer classes with the overall average cost of supply. This comparison indicates that the following categories presently pay less than the cost of supply.

Table 10 : Subsidized categories:

Category	Group
LT-1(a)	Bhagya Jyothi, Kuteera Jyothi
LT-1(b)	Domestic lighting
LT-2(a)	AEH
LT-4(a)(i) and LT-4(a)(ii)	IP Sets

LT-4(b)	LT Water supply and Sewerage Pumping
LT-6	Public Lighting
HT-3	Irrigation
HT-4	HT Bulk supply

3. The following categories currently pay more than the average cost of supply:

Table 11 : Subsidizing categories

Category	**Group**
LT-3	Commercial Lighting
LT-5	LT Industrial
HT-2(a)	HT Industrial
HT-2(b)	HT Commercial
HT-6	Railway Traction
HT-7	Residential Apartments

4. Paying Capacity

The Commission notes that it is necessary to understand the phrase "paying capacity of category of consumers and need for cross subsidisation" clearly in order to use it as a guide in the process of actual tariff determination. The Commission has to ensure the financial health of entities in the electricity sector. As per clause (a) of Sub-Section (1) of Section 11, this is based on the consideration that the Supply and Distribution of Electricity cannot be maintained unless the charges for electricity supplied are adequately levied and duly collected. This means that the overall operations of a licensee must be viable. Any supply to any category of consumers below cost must be compensated by levying a higher than cost tariff for some other category, i.e., by a cross subsidy. In the Commission's opinion, levying a tariff at the cost of service represents the rule; higher or lower tariffs represent an exception. The overall scheme of the Act requires that this exception to the rule be as limited as possible. This approach to reading the provisions of the Act is supported also, in the Commission's opinion, by sound principles of economics. Given the present distortions in the tariff structure and the need to avoid tariff shocks, it would be quite some time, say around five years, before tariffs in general reflect the cost of service. While considering "paying capacity" of any category of consumers who claim that they cannot afford to pay the cost of service, the Commission is of the opinion that it should consider only situations where even the basic minimum usage of electricity for domestic consumption is beyond the economic capacity of a certain category of consumers. The Commission does not think that the interpretation of this phrase should be extended to cover situations where, for example, a specific industry contends that the rate being charged to it is such as to so push up its costs so much as to render its products uncompetitive. The Commission has received several objections along these lines from industrial consumers. The thrust of the Commission's efforts in regulation is towards supplying power at the least cost. Having ensured power supply at the least cost, the Commission cannot go into the economics of production and cost composition of any specific industries or categories of consumers in order to decide whether the tariff applicable to them would be within their paying capacity except to the limited extent explained above. In the Commission's view, any other reading of the provisions of the Act would be entirely unacceptable.

5. The Commission notes that KPTCL has not carried out any survey to obtain data about the paying capacity of consumers. In this context, there is no other material also before the Commission to definitely assert either that subsidies are currently being extended to categories of consumers who have the paying capacity to bear the full cost of service or that categories of consumers who do not have the capacity to do so are being required to pay more than the average cost of supply to cross subsidise other sections. Nevertheless, the Commission has to take a view on this issue to ensure that the tariff determination by the Commission does not cause patent injustice to consumers who lack the capacity to pay. This has to be done on the basis of certain broad rules of thumb at this stage purely as an interim measure pending the carrying out of detailed studies by the Commission on paying capacity and obtaining information on a regular basis about consumption patterns of various classes of consumers.

6. Lifeline Concept

The Commission notes that, in several tariff categories, there are a large number of consumers who consume fairly small quantities of electricity. For instance, in the LT 1(b) i.e., Domestic Lighting category, the Commission notes that the average consumption per installation per month for the year 1999-00 was only 26 units. A further break up of this number in terms of various Divisions of the KPTCL in the State showed a range from 14 units per installation per month, in Madhugiri Division, the lowest in the State, to 59 units per installation per month, in Mangalore Division the highest in the State. Of the total number of 47 Divisions in the State, 14 Divisions were reported to have average consumption of 20 units per month or less. The Commission notes that where averages are at this level, there is a strong likelihood of a substantial number of consumers consuming at levels between 50% and 100% of the average. In this connection, the Commission notes that the KPTCL's database in the matter of slab wise consumption by various categories of consumers is woefully inadequate. This is unacceptable especially when the KPTCL has been operating for several years differential energy rates for consumption in various slabs. In fact, the estimates initially given by KPTCL in the filings for slab wise consumption were found to be obviously inaccurate when they were scrutinized during the validation session and had to be revised.

7. The Commission is of the opinion that a consumption level of 30 units per month in the case of domestic installations is what is required for minimum convenience. The Commission therefore has fixed this consumption level as the level up to which what is popularly known as a "lifeline" rate will apply. Any consumer whose consumption crosses this level will have to pay the cost of service in due course. The Commission recognizes that electricity is not a commodity that can be used without some capital investment. The presumption, therefore, is that a consumer who utilizes more than 30 units per month has the necessary capital to procure the equipments needed to utilize the electricity and should therefore be considered as one who is able to pay for the full cost of service. The charging of lifeline rates up to a consumption level of 30 units per month will, therefore, in the Commission's opinion, work out to be a self targeting mechanism. This opinion of the Commission is supported by the very low average levels of consumption in the LT 1(b) category to which reference has been made in preceding paras. Going by this data, it can easily be seen that even the level of 30 units per month would cover a very large percentage of domestic lighting installations. It is only these consumers who can be considered as being really poor and in need of subsidy on the basis of paying capacity. Extension of any subsidy to those who consume more than 30 units a month would lead to injustice to other consumers who have to pay the cross subsidy and also to the financial ill-health of the utility. The category of Domestic and AEH consumers who consume more than 30 units per month are much better organized and vocal than those consuming less than this level. However, this does not serve to substantiate any case they may have to paying less than the cost of service.

8. Having decided on the consumption level of 30 units per month as the level below which "lifeline" rates shall apply, the Commission has to look at the extent to which these rates should be subsidized by other categories of consumers. At present, Commercial and industrial consumers subsidise other categories of consumers. The concept of paying capacity should not, in the Commission's opinion, be used as the basis for deciding how much of cross subsidy can be extracted from these categories of consumers. For one, such a tariff policy has largely contributed to the present situation where many industrial consumers have switched over to captive generation. Secondly, the basic principle of tariff determination is one of bringing the tariff in line with the cost of service. In this sense, the tariff should not be determined by considerations of the benefit, actual or potential, that the user of electricity derives from such use. Thirdly, the Commission also has noticed that there are a substantial number of tiny and small consumers in the Commercial and Industrial categories who could not, by objective standards, be considered as possessing the capacity to cross subsidize other consumers. For example the average connected load under the LT 3 category for the State is 0.51 KWs. This covers a wide range from 0.109 KWs in the Pandavapura Division to 1.053 KWs in the Bangalore East Division. In terms of consumption per installation per month the range is from as low as 15 units per month in Tiptur Division to around 65 units per month in Hubli Division. It is thus clear that excluding the Bangalore Metropolitan Area and perhaps some of the larger cities and towns, the average consumption under the LT 3 category is very low. At a consumption level of 20 units per month, a customer under the LT 3 category would be paying an average rate of Rs.7.90 per unit. The Commission feels that this kind of a tariff structure that results in such high rates per unit of energy consumed is an aberration that needs to be corrected. The high level of fixed charges for commercial (LT3) consumers also leads to a regressive tariff structure under which consumers with a higher consumption pay a lower rate per unit compared to those consuming lesser quantities. The Commission has noted a similar situation in the LT5 category where more than 84% of the total number of connections are less than 10 HP connected load. The average connected load of these installations of less than 10 HP connected load is 4.35 HP. This average probably covers several installations which are well below this number. In fact, the Commission feels that considerable injustice would be caused to such small consumers if they were to be charged tariffs to support cross subsidies. Considering all the above factors, the Commission is of the opinion that even "lifeline" rates should be so designed as to recover at least 75% of the average cost of supply. As things stand at present, it is not possible to estimate the number of consumers who would be consuming less than 30 units per month and for how many years. However, given our level of economic development, the subsidy arising out of giving a "lifeline" rate as explained above may continue for quite some time to come. As far as small commercial consumers consuming upto 30 units per month and small industrial consumers with connected load of up to 5 HP are concerned, the Commission is of the opinion that they should be charged tariffs that cover only the average cost of supply and that they should not be required to contribute towards cross subsidizing other consumers. Through this Order the Commission has initiated a move in this direction.

9. Subsidy and Stand of the Government

In the hearings conducted by the Commission and in the objections received from consumers the Commission has noticed the following points being made by several objectors:

1. Whenever any category of consumers is to be subsidized the entire burden of such subsidy should be borne by the Government. No part of the subsidy should be recovered by cross subsidy from other consumers.
2. There was a strong opinion voiced by the urban consumers that the burden of subsidy in respect of agricultural tariffs is being shifted to urban domestic consumers and that this should be avoided. The Public Affairs Centre (PAC), Bangalore,

for instance has stated that, till recently industry used to cross subsidize farmers and that this option is now being closed due to the decline in industrial consumption of power. The PAC has concluded (rather incorrectly as will be seen from Tables 10 and 11 above) that the burden of agricultural subsidy is borne solely by the domestic consumers of electricity. The PAC feels that if state policy requires such large subsidies to the agriculture sector, the cost should be borne by the State Budget and not by other users of electricity who have no option but to depend on KPTCL, a monopoly undertaking.

10. The Commission has considered these objections. It is quite clear that there is a very incorrect appreciation amongst many consumers about the extent of subsidies provided to various categories and about those categories that actually cross subsidize others. As can be readily made out from the above discussion, it is not only agricultural consumers or rural Bhagya Jyothi consumers who are the beneficiaries of subsidy. Domestic consumers as well as AEH consumers are also substantial beneficiaries of subsidies. A rural-urban divide in terms of beneficiaries of, and contributors to, subsidies respectively is also not based on facts. A majority of AEH connections are in urban areas and domestic connections in urban areas also, on an average, consume more energy than those in rural areas. The quality of supply in urban areas is also better than in rural areas. On the contrary, there are a large number of LT3 and LT 5 connections in the rural areas as well and these categories also contribute to providing cross subsidies. The Commission has therefore tried to rationalize the entire scheme of subsidies and to bring it more closely in alignment with paying capacity than at present.

11. As far as the issue of Government of Karnataka bearing the entire burden of subsides is concerned, the Commission notes that till the year 1999-2000, the KEB has been making up its accounts in such a manner as to show the stipulated minimum return of 3% on its net fixed assets by recording the gap in revenues as subsidy receivable from the State Government. The Government has also been releasing amounts of subsidy periodically. The outstanding subsidy due from the Government as on 31.3.2000 as per the KEB's Annual Accounts was Rs. 538 Crores. In the budget for the year 2000-01 the State Government has provided for Rural Electrification subsidy of Rs.878.62 Crores. The Commission has written to Government (vide its Letter No B/04/0/1105 dated 13.10.2000) enquiring whether the practice followed earlier by the KEB of showing the entire amount needed to earn the return of 3% as subsidy receivable from the Government would be valid for the year 2000-01 or not. The Commission has not received any responses from the Government of Karnataka in writing. However, the Principal Secretary, Department of Energy, Government of Karnataka, who was heard by the Commission on 8.12.2000, stated that the Government had yet to work out a plan to bridge the gap. He explained that Government was earlier providing subsidies only to meet the revenue deficit of the KEB and not specifically identifying subsidies with categories of consumers. He stated that Government would decide on subsidies to be given to individual categories of consumers after the Commission had determined tariffs for such categories on a cost plus basis. He added that while the Government recognized that moving to tariffs on a cost plus basis straight away would be difficult, and that while KPTCL itself had recognized this situation in the tariffs proposed by it to the Commission for approval, Government's objective was to phase out subsidies completely and make KPTCL stand on its legs in due course. He also clarified that one of the objectives that Government would pursue is the reduction of cross subsidies.

ERC Analysis

Aggregate Requirement

1. In accordance with Section 27 of KER Act, 1999, KPTCL in its capacity as licensee has filed the expected revenue from the existing charges for the year 2000-01 with the Commission for approval. The details of the expected revenue from charges are given below in brief:

Table 12 : Revenue Requirement (Expenditure) for financial year 2000-01

(Rs. Crores)

Sl No	Item	Total
	Purchase of Power	4254
2	Employee Cost	876
3	Operation & Maintenance	142
4	Interest & Finance charges	500
5	Depreciation	299
7	Other Expenses	20
8	Expenses capitalized	**(-)** 85
9	**Total (net) Expenditure**	**6006**

ERC Analysis

2. Cost of Power Purchase

The details contained in the cost of power purchase are analyzed below :

1. Sales Forecast:

1. The details of power purchase indicate that the total energy to be purchased for the year 2000-01 is 28,619 million units (MUs). The projected sales are 18180 MUs with a T&D loss of 36.5 %. The energy input into the system during the year 1999-2000 was 26,117 MUs and the estimated T&D loss was 38 %. The projected energy input of 28,619 MUs for the year 2000-01 indicates a growth of 9.58 % over the previous year.

2. The KPTCL has not been carrying out a rigorous sales forecast in the past. This might have been because of a situation of persistent shortages in the overall supply compared to demand. The focus has, therefore, been on estimating the likely availability of power from all sources and then curtailing supply to match availability. However, this approach does not appear to be appropriate for the current year. In 2000-01, the Commission expects, on the basis of the actual trends observed so far, that availability of power would not be the binding constraint on sales.

3. The following figures give the total energy input into the system from April 1 to November 30 in each of the years 1999-2000 and 2000-01.

Table 13 : Energy input from April 1 to November 30

Year	Total energy input (MU)
1999 2000	16319
2000-01	16903
Growth %	3.58%

4. If the projected overall growth for 2000-01 over 1999-00 of 9.58% were to be realized, it would require a growth of 19.61% in the figures of Dec. 2000-Mar. 2001 over the corresponding period of the previous year, which seems a very unlikely scenario, given the actual growth trends for the same periods observed in past years.

5. The Commission recognizes the uncertainty in sales forecasting caused by lack of reliable data relating to agricultural consumption. As far as other categories of consumers are concerned, the Commission notes that KPTCL's forecasts are based on simple average annual growth rates over the period 1995-96 to 1999-2000. The Commission has calculated the Compounded Annual Growth Rates (CAGR) over the previous 10 years of both the numbers of installations and the average consumption per installation in each of the metered consumer categories. Applying the CAGRs to 1999-2000 figures for all consumer categories other than HT Industries, IP Sets and other unmetered installations and using KPTCL's estimates for these three latter groups, the Commission concludes that the sales forecasts filed by the KPTCL are about 500-600 MUs over-estimated. However, in view of the large segment of unmetered consumption as well as the quantum of commercial losses, sales forecasting that proceeds by aggregating forecasts of individual consumer categories may not produce realistic estimates. The one statistic relating to the system that is known with certainity is the total energy input into the system. KPTCL has now revised their input projection to 27197 MUs, a growth of 4.1% over 1999-2000 (vide Lr.No./ KPTCL / B36 / 5705 / C / 2000-01 / 1754-55 dated18.11.2000). This growth is in line with the actuals from April to November 2000. The Commission has, therefore, accepted this number. Having fixed the total input into the system the Commission has proceeded to estimate sales under various categories of consumers as described in the succeeding sections.

2. Forecast of IP Set Consumption

1. The Licensee charges a flat (HP based) rate for IP sets below 10 HP capacity. Though IP sets serviced after 1.1.97 are said to have been serviced only with meters, no data on meter readings on these pump sets has been furnished by KPTCL. The Licensee was required by the Commission (vide Letter No.B/04/0/1282 dated 11-11-2000) to furnish data on such meter readings. KPTCL in their reply (vide No KPTCL/B-36/5705/C/2000-01/1692-94 dated 15-11-2000) stated that they have to collect the details from various divisions and the same will be furnished to the Commission as early as possible. However, KPTCL has not furnished the details to date. In this situation, the Commission presumes that the licensee does not have the data. Objections have been filed relating to the inability of KPTCL to furnish even this data. While the Commission agrees that this represents a very unsatisfactory state of affairs, the Commission has had to take a realistic view of the entire situation. It would not be practical for the Commission to insist on setting right all the numerous deficiencies in the statistical data base of the KPTCL before taking up its ERC and Tariff filings for consideration. In the absence of this information, the Commission has had to use other data for the estimates.

2. The energy consumption of IP sets forms a significant portion of total energy consumption in the State. The ERC and Tariff filings are based on an estimated total consumption of 7361 MUs (or 25.72% of total energy input of 28619 MUs) by IP sets. The average number of IP sets of 10 HP or less taken into account by KPTCL is 11,80,037. This number has been used for the calculation of estimated consumption.

3. KPTCL has based their estimate on an IP set consumption of 6223 units per annum per IP set. KPTCL has arrived at this number from the data obtained by metering the secondary side of some distribution transformers in the State feeding predominantly IP sets. The total number of such sampling points in the State in the year 1999-2000 was 1215 and the IP sets connected to these was 12,504. As the consumption of IP sets is a vital input for computation of T&D losses, the Commission, vide its Letter No. KERC/Procedure dated 10.1.2000 had directed the KPTCL to ensure that at least two metering points per section (1606 metering points in 803 rural sections) should be metered by March 2000 in order to improve the coverage of the sample. While the Commission does not have any official confirmation from the KPTCL about the implementation of these guidelines, returns received for the first quarter of 2000-01 show that the number of sampling points have been increased from 1215 to 1671 and also the number of IP sets monitored have been increased from 12,504 to 17,395. The Commission had also found during inspection of one of the Divisions that single-phase meters have been used on the transformers instead of 3 phase meters exposing lack of application of mind and absence of monitoring by KPTCL. Upon the Commission's directions, KPTCL has taken up a programme for replacement of the single phase meters by 3 phase meters.

4. There are several problems that arise in the estimation of IP set consumption using data from these sampling points. The Commission has been wrestling with this issue ever since its inception. The major problems that arise in this connection are discussed below:

i. Calculation of average consumption per IP Set –

This calculation is rendered unsatisfactory because of a substantial number of readings not being available. Besides, KPTCL does not have comprehensive and realistic data on the number of functioning IP sets under each transformer center. The Commission has come across independent studies that indicate a substantial number of non-functioning or defunct IP sets, both open as well as bore wells. During the hearing of objection petitions by the Commission, the representatives of the Akhila Karnataka Bayaluseeme IP set Balakedarara Sangha also made the same point. Moreover, the KPTCL does not have any data on the extent of non-IP set load connected on the monitored feeders feeding IP sets. An analysis of the transformer center-wise readings generated by the KPTCL was done by International Energy Initiative (IEI), an expert body working in this area. This study reported that the data seem to indicate considerable non-IP set loads in some of these feeders. The Commission therefore required KPTCL (vide its letter No T/01/DT/DDD/0/1316 Dated 16.11.2000) to conduct a quick census of the loads covered by each sample Distribution Transformer Centre (DTC). However, till the date of this order, the Commission has not received comprehensive response from the KPTCL in this regard.

ii. Open well and Bore well Numbers:

KPTCL has worked out a simple average of IP set consumption without identifying the averages for open wells and bore wells. The data available also does not permit the Commission to come up with any reliable estimates of the consumption of each of these categories. However, some figures in the sample data indicate that the consumption of IP sets attached to open wells is much lower than those on bore wells.

iii. Distribution line losses below the meters:

The total consumption recorded by the sample meters includes not only the consumption of IP sets and other loads being fed by the transformers in question, but also includes distribution losses. In their initial filing, KPTCL had taken the distribution losses below the DTC meters at 10%. During the validation sessions, the Commission desired to know from KPTCL the basis of this estimate of 10%. Subsequently, the KPTCL reduced this number to 7.98% in their revised filings. The Commission feels that this estimate of 7.98% was arrived at as the difference between the IP set consumption (at the DTC metered level) of 6763 units per annum as reported by the Director (Research) of KPTCL and the average consumption per IP set per year of 6223 units as furnished in the tariff filing. The Commission subsequently requested KPTCL to furnish the calculations leading up to the figure of 7.98%. These calculations were not readily provided and some sample calculations submitted later indicated varying figures of loss very different from 7.98%. The Commission had also obtained some sample data relating to these losses from its Technical Consultants M/s.MECON. This data seems to indicate that the distribution losses below the meters would be approximately 4 % to 5% only.

iv. The number of IP Sets:

The total number of IP sets of 10 HP or less as on 1.4.2000 is reported to be 11,62,537. The number of un-authorised IP sets has been roughly estimated. While figures of even 1.5 lakhs have been mentioned, the response to the facility given recently for regularizing the unauthorized IP sets has been much lower than this number.

5. The Commission has also noted that KPTCL has been arbitrary in its reporting of IP set consumption. For the year 1999-2000, average consumption per IP set was 6763 units per year as per the report of the Director (Research). However, for the calculation of the total IP set consumption for the year 1999-2000, a lower figure of 5400 units per year has been used. This number is said to have been arrived at by obtaining the details from the Zonal Chief Engineers.

However, KPTCL has not furnished any such data to the Commission. The Commission's request for providing the supporting information has also not been responded to.

6. As mentioned earlier, the coverage of sample points has been substantially increased for the year 2000-01. The Commission has received sample IP set meter readings for the period April to September 2000. This data has been tabulated along with the corresponding figures for the same period in 1999-2000 and is shown in the following table (the figures do not exclude distribution line losses) :

Table – 14 : Assessment per IP set in Units

Sl.No.	Year	Apr	May	Jun	Jul	Aug	Sep
1	1999-00	594.28	484.13	457.12	517.17	581.85	546.82
2	2000-01	713.46	599.83	441.81	517.78	556.28	490.29

Table – 15 : Assessment of total IP consumption in MU

Sl.No.	Year	Apr	May	Jun	Jul	Aug	Sep	Total Apr-Sept
1	1999-00	670.61	547.54	518.14	588.15	663.89	625.58	3613.91
2	2000-01	833.46	702.15	518.36	609.12	662.33	628.94	3954.16

7. Data from this table seems to indicate that total IP set consumption in 2000-01 is higher than that recorded in 1999-2000 by 9.4 %. It is to be noted that the data for 1999-2000 from which the above figures have been extracted add up to a total IP set consumption of 7698 MUs that is much higher than the figure of 6292 MUs reported in the Annual Accounts of the KEB for 1999-2000.

8. It is in this background that the Commission has to come to some conclusions about the IP set consumption projected by the KPTCL. As stated earlier, KPTCL has projected 25.7% of the total energy input as IP set sales. The percentage of IP consumption to total input for the first few months of 2000-01 is as follows:

Table – 16 : IP Set Consumption and Total Energy Input

Month	IP Consumption In MUs.	Total Energy Input In MUs.	% age IP consumption to energy input.
Apr.	833.46	2399	34.74
May	702.15	2282	30.77

June	518.36	2025	25.58
July	609.12	2136	28.51
Aug	662.33	1942	34.10
Sept	628.94	2026	31.04
Total	**3954.16**	**12810**	**30.87**

9. Even after removing distribution line loss, it would appear that IP set consumption would be around 28.41 % of total energy input, substantially more than as estimated by KPTCL in its tariff filings. The Commission has scaled down the purchase quantity to 27197 MUs, for reasons that are explained in a subsequent section. The estimate of 7343 MUs for IP sets amounts to only 27 % of even this reduced energy input into the system.

10. For reasons mentioned above, the estimate of IP set consumption in 2000-01 is also subject to a number of shortcomings. The Commission would not like to substitute the arbitrary estimate of KPTCL by a relatively un-realistic estimate of its own. The Commission has been working intensively with the KPTCL to improve the quality of the sample data being used for calculating IP set consumption. While the desired levels of reliability for these estimates is possible only when all IP sets are metered and the readings recorded on a regular basis, the Commission is also aware that this programme of metering would take a few years for being fully implemented. In the interim, and purely as a measure of recognizing the practical limitations inherent in the present situation, the Commission accepts the estimate of 7343 MUs made by KPTCL as the ceiling up to which KPTCL may proceed to supply power to the unmetered IP sets. In case the actual consumption is likely to exceed this number, KPTCL would be required to come back to the Commission for its approval regarding the sources from which the power thus required may be procured. The Commission feels that this restriction is very essential as otherwise the entire tariff calculation would go haywire and the licensee may land up in deeper financial trouble. For example, during the year 1999-2000, when the energy availability went up by 3,372 MUs, the metered consumption went up only by 637 MUs. This only highlights the need for careful monitoring of agricultural consumption.

11. The Commission notes that KPTCL has been continuously extending the last date for regularization of unauthorized IP sets. This policy would lead to such IP set holders not taking the KPTCL seriously at all. The continuance of unauthorized IP sets would seriously affect the KPTCL's efforts to recover the stipulated charges from IP set consumers. The Commission, therefore, directs KPTCL not to extend the dead line beyond that already announced. Once the dead line is over, KPTCL must proceed to disconnect all unauthorized IP set connections that exist beyond that date. Unauthorized IP set connections represent theft of energy that needs to be dealt with accordingly. **KPTCL should report to the Commission latest by 31st March, 2001 confirming that all unauthorized IP sets have been disconnected**.

4.2.3 T&D Loss Estimate

1. The licensee has declared T&D losses for the last few years, as follows :

Table – 17 : T&D Losses

Year	% Loss
1997-98	18.56
1998-99	30.19
1999-2000	38.00
2000-01(projected)	36.50

2. It may be noted that a sudden increase in the T&D loss from 18.56 % in 1997-98 to 30.19 % in 1998-99 and a further increase to 38 % in 1999-2000 has been reported. The Commission, right from its inception, has been trying to understand the reasons behind this sharp increase in reported T&D loss. At various points of time, the Commission has required the KPTCL to justify the sudden increase. KPTCL has attributed this sharp increase to a more scientific assessment procedure for estimation of T&D loss that is now being followed. The total quantum of unmetered consumption plus T&D loss is known by deducting metered consumption from the energy input into the system. The changes in assumptions used for agricultural consumption estimation have also been reflected in the changing figures of T&D loss. However, as far as the question of a more scientific assessment procedure is concerned, the details given in the preceding section regarding IP set consumption estimates show clearly that the procedure now being followed cannot be said to be in any way more scientific than the earlier procedures.

3. Since non-metered consumption by IP sets has been largely blamed for the difficulties in estimation of T&D losses, the Commission decided to look at distribution losses in urban areas with a view to ascertain what these losses were in areas where there were no, or a very negligible number of, pump sets.

4. Accordingly, the Commission took up the estimation of distribution losses below the 11 kV level in the Bangalore Metropolitan Area Zone (BMAZ) and also in 45 cities and towns with population of 50,000 and above. The Commission also laid down a detailed procedure for computation of these losses and prescribed formats in which the reports had to be sent to the Commission on a monthly basis.

5. The distribution loss estimates reported in respect of urban areas leaves much to be desired. The Commission has been frequently taking up with the KPTCL the wide variation in distribution losses in BMAZ from month to month and also between divisions. There has also been some pattern discernible in the figures reported. Some divisions have been consistently reporting much higher losses than other divisions. The Commission has repeatedly been directing KPTCL to probe these variations in loss percentages in order to formulate an action plan to reduce the losses. However, the response from KPTCL has been woefully inadequate. They seem to be lacking in awareness and seriousness in dealing with this matter.

6. The Commission had also engaged Central Power Research Institute, Bangalore, to conduct distribution loss studies in Davangere, Dharwad and Hubli cities. Similar loss analysis studies were also conducted by MECON Ltd., in respect of Gulbarga. The result of these studies show that the average percentage loss of about 65 numbers of 11 kV town feeders (excluding LT) involved in the study is about 4.5 % only and the total distribution loss including 11 kV is 13.58%. However, the actual loss reported by KPTCL in respect of these four cities for the past 15 months show losses ranging from 8.25% to 62.18%, as can be seen from the Annex-3 (the percentages referred to in this paragraph are of the total energy input at 11 kV). These figures are not accurate as the meters do not appear to have been properly calibrated.

7. On the basis of the theoretical distribution loss levels as computed by CPRI and MECON and the actual loss levels, a rough conclusion can be arrived at about the extent of commercial loss in cities and towns. This loss may be reasonably estimated at 10% to 15% level.

8. Based on the above studies and the data collected over a period of six months, the Commission issued a direction to KPTCL to reduce the distribution loss in all cities and towns with a population of 50,000 and above to 15% wherever it was above this level hitherto. This direction was issued after first issuing a notice of the direction to the KPTCL and after considering KPTCL's comments thereon. However, the Commission has not received any feed back so far about KPTCL taking any concrete steps to control and bring down distribution losses.

9. The Commission has consistently been directing KPTCL to separate transmission losses from distribution losses and to measure each of these individually. The Commission has adopted this approach because the possibility of theft in the case of transmission is virtually non-existent. The System Improvement Cell of the KPTCL that seems to have been charged with the responsibility of monitoring transmission losses has not been able to provide consistent data to the Commission even in respect of transmission losses. The transmission loss and distribution loss for the year 1998-99 and 1999-2000 as well as the projections for the year 2000-01 as included in the ERC filing are given below :

Table – 18 : Transmission Loss and Distribution Loss

Year	%Transmission loss	%Distribution loss	Total loss %
1998-99	15.60	13.89	29.49
1999-2000	16.46	20.99	37.45
2000-01	15.17	20.45	35.62

10. It is seen from the above table that the transmission loss has been estimated to be abnormally high by any standards. Besides, the figures given above (as per forms T19 and D20 of the filing) are at variance with the overall T&D loss figures used by KPTCL.

11. KPTCL has got a system load flow analysis done for the year 1998-99 and 1999-2000 by Power Research and Development Consultants Private Ltd. (PRDC), Bangalore. The Consultant has arrived at the following loss percentages at various voltage levels.

Table – 19 : PRDC Estimate of Transmission Loss

Sl. No.	Voltage levels	Percentage loss for 1998-99	Percentage loss for 1999-2000
1.	400 kv	0.59	0.66
2.	220 kv	3.72	4.23

3.	110 kv	0.97	0.98
4.	66 kv	1.39	1.41
5.	33 kv	2.87	2.54
Total		**9.54**	**9.82**

12. Similar studies conducted by M/s MECON on energy balance based on available meter readings and supplemented by estimates where meter readings were not available show losses at various voltage levels for the year 98-99 as indicated below:

Table – 20 : MECON Estimate of Transmission Loss

Sl. No.	**Voltage levels**	**Percentage loss for 1998-99**
1.	400 kv	0.21
2.	220 kv	5.03
3.	110 kv	1.22
4.	66 kv	3.96
5.	33 kv	0.91
Total		**11.33**

13. Since there are wide gaps in the metering data relating to transmission losses, the Commission has been left with no option but to go on the basis of the load flow studies conducted by the Consultants. Though the loss levels at specific voltages vary as between the PRDC and MECON Studies, the total loss percentages upto the 33 kV level (including the 33 kV to 11 kV transformation) are close to each other.

14. T&D losses have been one common point amongst all objectors. Essentially, the objectors have argued that to the extent that T&D losses are actually represented by theft, KPTCL has no right to load such losses on to paying consumers. The Public Affairs Centre (PAC), Bangalore, for instance, has pointed out that the T&D losses now projected is equal to the total revenues generated from the industrial and domestic consumers combined. They have further pointed out that KPTCL's sales in terms of units has risen only marginally over the last four years, but its purchases of power have increased at a faster rate, implying wastage and loss. Prof. Ranganathan of IIM, Bangalore, who appeared for the PAC at the hearing again stressed this point about the futility of increasing purchase quantity when it would lead to greater losses (both due to the high T&D loss and the incremental sales going to non-remunerative categories). PAC recognises, however, that some level of T&D losses is inherent in the business. The PAC wants KPTCL to return to its earlier level of 18.6 % of T&D loss and then see whether a tariff revision is needed. Substantially the same argument has been made by many other objectors.

15. The Commission has carefully examined the facts discussed above and the various points made by the objectors. A balanced view of the matter needs to be taken. The Commission would not be justified in allowing a pass-through of only the technical loss that is unavoidable as per international or national standards as demanded by many of the objectors who appeared before the Commission. These standards are based on optimal conditions that do not obtain in practice at present in the KPTCL system. Technical losses are a function of the specific physical characteristics of the T&D system. It is accepted all around that the T&D system in Karnataka has suffered from inadequate investments in upgradation for the last several years. In this situation, the Commission would have to agree to a pass-through at least of that level of Technical losses that is inherent in the system as it exists. Investments in upgradation of the system will have to take place. As and when this happens, the reduction in losses will be to the benefit of consumers. However, at the same time, the financing costs of such investments would also have to be borne by consumers.

16. The PRDC Study clearly shows that Transmission system losses are around 10 %. Distribution losses in cities are around 13.5 %. The KPTCL has also conducted load flow studies on 735 predominantly rural feeders taking load conditions as well as line parameters into account. The average loss of these feeders worked out to 12.5 %. The Commission, therefore, estimates the total technical T&D loss in the system to be around 23 % to 24 %.

17. The basic principle followed by the Commission is that T&D losses for the reduction of which additional investment is required would have to be allowed to pass through at this stage. On this criterion, the portion of commercial losses that arises due to faulty meters also cannot be disallowed. This is because the replacement of these meters is a capital intensive exercise. The Commission notes that the list of works proposed to be taken up by the KPTCL in 2000-01 (totalling Rs.911 Crores) includes a major programme of replacement of existing meters by high precision electro-mechanical / electronic meters at a total project cost of Rs.277.15 Crores. Of this, an amount of Rs.124 crores has been provided in the list of works for 2000-01. KPTCL has reported that the average increase in consumption recorded as a result of changing of meters has been over 15 %. The metered consumption as a percentage of total energy input has been around 33 % to 35 %. The increase in recorded consumption as a result of changing the meters can therefore be conservatively assessed at least at 3 % of total energy input. This figure of 3 %, therefore, can be taken as the loss that can be eliminated only by investment in metering.

18. Taking all the above factors into account, the total T&D losses that need to be allowed to pass through for 2000-01 would be approximately 26 %. **The KPTCL is directed to submit to the Commission for approval an Action Plan to reduce this level of technical loss by at least 2 % in 2001-02**.

19. The balance T&D loss claimed, of 10.5 %, in the Commission's opinion, represents commercial losses that are capable of being eliminated without any additional investment and solely through improved organizational efficiencies. The Commission would proceed to approve the ERC and Tariff filings on the basis of a reduction of 5.5 % in commercial losses in 2000-01 and a further 5% in 2001-02.

20. To summarise, the revenue requirement for 2000-01 will be calculated on the basis of a T&D loss of 31 % (comprising technical T&D loss of 26 % and commercial losses of 5 %). Given the power purchase quantity of 27,197 MUs that has finally been approved by the Commission, the sales quantity for 2000-01 works out to 18,766 MUs, an increase of 586 MUs over KPTCL's original estimate,

3. Power Purchase Quantity

1. The ERC filing includes energy purchase of 28,619 MUs for the year 2000-01 for selling 18,180 MUs after considering a T&D loss of 36.5 %. The Commission has had several meetings with the KPTCL and has raised several questions in writing also about these power purchase figures. The Commission regrets to note that the KPTCL has been consistently unhelpful and tardy in providing supporting data and confirmation for the various numbers used in the power purchase details. The Commission has therefore had to independently verify these numbers. Details of water storage in various hydel reservoirs and power availability from these stations have been obtained by the Commission.

2. In its supplementary filing dated 18-11-2000, the KPTCL had reduced the quantum of power purchase to 27,197 MUs. The reduction was caused mainly by reduction in (i) KPTCL hydro- 248 MU, (ii) CGS –175 MU, (iii) Thannirbhavi IPP project- 410 MU and (iv) TATA IPP project – 267 MU. KPTCL has shown the entire reduction in sales arising thereby (i.e., after deducting the T&D loss of 36.5% from the reduction in power purchase quantity of 1422 MUs) of 904 MUs as reduction in the IP set consumption. The reason given for this is that good rains in October have led to a reduction in agricultural demand. KPTCL has now estimated the consumption by unmetered IP sets at 6439 MUs compared to the earlier estimate of 7343 MUs. This revised estimate does not seem to be supported by month wise data obtained from the sample DTC metering centers as explained in a preceding section. The Commission notes that KPTCL has been arbitrary in arriving at this revised estimate of IP set consumption. The Commission, therefore, rejects this sales estimate of KPTCL and retains the originally estimated quantity of 7343 MUs for unmetered IP set consumption.

3. The Commission examined this revised filing and found that the total quantum of power purchased from KPCL hydro sources has been reduced by KPTCL from 10242 MUs projected earlier to 9994 MUs. The Commission's assessment of hydro power availability indicates that 10643 MUs will be available. The Commission notes that the availability from KPCL Hydro sources of 10643 MUs was confirmed by KPTCL themselves vide their letter No.CEE/LDC/F486/6309 dated 9.11.2000. No reasons have been given by KPTCL for the subsequent reduction to 9994 MUs. Accordingly, the Commission has taken the total purchase at 27,197 MUs while retaining KPCL hydro at 10643 MUs and reducing power purchase by 649 MUs from the following sources on a merit order basis (the actual purchases up to end August, 2000, as furnished by KPTCL have been fully provided).

Table 21 : Power Purchase based on Merit Order

Station	Quantity (MUs)	Variable Cost (Paise per unit)
Rayalaseema	90	359
MSEB	364	260
Eastern Region	195	230

4. Though the Yelahanka Diesel Plant has a very high energy charge of Rs.2.94 per unit, the projected purchase quantity of 740 MUs has been allowed in view of its nearness to the Bangalore load center as explained by KPTCL vide their letter No.KPTCL/B36/5705/6/2000-01/1754-55, dated 18.11.2000. As far as the units at the Raichur Thermal Power Station of the KPCL are concerned, the Commission has gone by the variable cost of power produced at this station rather than by the rate per unit fixed as the transfer price for sales from KPCL to KPTCL. The rate fixed for power from KAIGA Atomic Power Plant has been indicated as Rs.3.00 per unit by KPTCL. The Commission does not have the cost break-up relating to this project. However, since atomic power plants have to be run on a base load basis and cannot be shut down frequently, the Commission has allowed the entire projected purchase from KAIGA. The Commission also notes that this quantity represents the Karnataka's share from this Central Generating Station. Regarding the Jindal Tractabel Power Plant, the Commission notes that the rate per unit above purchase quantity of 657 MUs per year comes down to Rs.2.20. Taking this into consideration, the Commission notes that purchase from Jindal would qualify, even on a merit order basis, in the above context. Therefore, purchase from Jindal has been allowed.

5. In their presentation to the Commission as the commencement of the public hearings on 27.11.2000, KPTCL has indicated the power purchase quantity to 27197 MUs and the total power purchase cost as Rs.3,850 Crores

6. As has been noted in an earlier section, the increase in energy input into the system in the first 8 months of the current year over the corresponding period of the previous year has been 3.58 %. The full year estimate of 27197 MUs represents approximately the same percentage increase over the actuals for the full year 1999-2000.

7. On consideration of all the above factors, the Commission has finalized the estimate of power purchase by KPTCL from various sources and the cost thereof as follows :

Table – 22 : Power Purchase 2000-01

SL NO	SOURCE	AS PROPOSED BY KPTCL (AS PER ORIGINAL FILING)			AS APPROVED BY KERC		
		ENERGY	COST	AVG RATE	ENERGY	COST	AVG RATE
		MU	RS CRS	PS/KWH	MU	RS CRS	PS/KWH
1	KPCL-HYDRO	10242	387.99	37.88	10643	382.91	35.98
2	-THERMAL	8235	1701.64	206.64	8206	1660.43	202.34
	TOTAL KPCL	18477	2089.63	113.09	18849	2043.34	108.41
	CENTRAL GENERATING STATIONS:						
3	NTPC	2990	403.65	135.00	3151	425.39	135.00
4	NLC	2055	320.01	155.72	1752	261.05	149.00
5	MAPS	230	44.39	193.00	377	72.76	193.00
6	KAIGA	162	48.60	300.00	332	99.60	300.00
7	Transmission charges		60.00			76.00	
	TOTAL	5437	876.65	161.24	5612	934.79	166.57
	NEIGHBOURING STATES						
8	M.S.E.B	730	189.80	260.00	102	26.52	260.00
9	A.P.SE.B.				3		
10	WESTERN REGION				23	5.29	230.00
11	EASTERN REGION	648	149.04	230.00	354	81.42	230.00
12	DVC	450	90.00	200.00			

	TOTAL	1828	428.84	234.60	482	113.23	234.92
	IPPs						
13	THANNIRBHAVI	410	182.45	445.00			
14	RAYALSEEMA	137	46.58	340.00		9.66	*
15	TATA	267	89.45	335.02			
16	JINDAL	657	165.56	251.99	923	229.34	248.47
	JINDAL Revised: 923 MU at Rs.229.34 Crs)						
	TOTAL	1471	484.00	329.06	923	239.00	258.94
17	CO-GEN	226	68.03	301.02	222	66.82	301.00
18	VVNL	1180	307.00	260.17	1109	302.56	272.82
	GR TOTAL	28619	4254.19	148.65	27197	3699.74	136.03
	* Fixed charges would be payable even though energy charges would be nil						

8. Scheme-wise details of power purchase are furnished in **Annex 3**. There have been number of objections about power purchase quantity. Many objectors have questioned the need for the power purchase quantity saying that this could be reduced considerably if T&D losses were reduced. Objectors representing Marxist Party and others have stressed the need for fully exploiting the hydro power potential of Karnataka so that inexpensive power could be made available. As far as the issue of T&D loss is concerned, the Commission has had to take an overall view of the issue, keeping in mind the difficulties in achieving a drastic reduction in T&D losses overnight. Regarding exploiting hydro power fully, the Commission agrees that this is a desirable objective; however, there are various environmental, resettlement and rehabilitation and inter-state dispute issues that come in the way of speedy exploitation of hydro potential. Besides, hydro power is subject to the vagaries of the monsoon and is, therefore, not very dependable. Also, the cost of ongoing hydro projects is such that the cost of power produced from them is likely to be substantially higher than the old hydro projects. There is, therefore, thermal generation is inevitable.

4.2.5 Power Purchase Costs

1. The rates for sale of power by the KPCL to the erstwhile KEB and thereafter to the KPTCL were governed by orders issued from time to time by the Government of Karnataka in terms of its powers under the proviso to Sub-section (2) of Section 43A of the Electricity (Supply) Act, 1948. Government of India has issued a notification dated 11.9.2000 in exercise of its powers under Section 51 of the Electricity Regulatory Commission Act, 1998. With effect from that date, sub-section(2) of Section 43A has been omitted in respect of Karnataka. KPCL has now filed an application with the Commission for the revision of the tariff of its generating stations. This application has been filed while the tariff revision application of the KPTCL was already under consideration. The application has been found to be inadequate in respect of several items of information required and therefore KPCL has been required to provide this information. It will not be possible for the Commission to take a decision on the application of the KPCL for the revision of its tariff before the 90 days statutory time limit for passing orders on the tariff revision application of the KPTCL expires. Consequently, the Commission has decided to compute power purchase cost from KPCL at the rates laid down in the Government Orders. As far as tariff for units 5 and 6 at the Raichur Thermal Power Station are concerned, KPTCL has produced a copy of the power purchase agreement entered into with KPCL. However, KPTCL has produced a letter from KPCL to the effect that the completed costs of these units is still under audit and that the final rate for sale of power from these units will be known only after the audit is completed. Pending this, ad hoc rates of 264.48 paise for unit-5 and 209 paise for unit-6 have been provided in the estimates. The Commission has accepted these numbers in the absence of any other basis. However, since the Commission has not been provided the required data in time and since it will not be possible to drastically adjust the tariff to the end consumers, **the Commission also orders that the finally approved tariff for units 5 and 6 as arrived at after completion of the audit will be given effect to only prospectively**.

2. As far as purchases from Central Generating Stations are concerned, the KPTCL has produced a few copies of bills raised by these stations. Details of agreements, if any, entered into between KPTCL and the Central Stations have not been provided. In their absence, the Commission has to go by the rates included by the KPTCL as supported by the copies of bills produced.

3. KPTCL has also not provided any supporting details whatsoever for the rates agreed to for purchase from Maharashtra State Electricity Board or Western Region Electricity Boards or Eastern Region Electricity Boards. Repeated requests to KPTCL to provide this information have been of no use.

4. Regarding purchase of power from Jindal Tractabel Limited, KPTCL has, in its latest filing, shown a flat rate of 260 paise per unit for purchases up to 657 MUs in a year and 220 paise per unit for quantities in excess of 657 MUs. The KPTCL has provided a copy of a Government Order sanctioning purchase of power from Jindal at a rate of 260 paise per unit. The Commission has requested KPTCL to provide the detailed calculations and assumptions for the rate of 260 paise. However, this has not been provided. KPTCL has been already buying power from Jindal even though the PPA relating to the same has not yet been approved by the Commission as required under Section 25(3) of the KER Act, 1999. It is only after the filing of the tariff revision application that the KPTCL has, vide its letter No.KPTCL/B-36/5703/6/2000-01/1745-47, dated 17.11.2000 sent the PPA initialed with Jindal for the approval of the Commission. The Commission has, therefore, only provisionally included the power purchase cost of Rs.224.34 Crores on account of Jindal and makes it clear that this amount is subject to whatever is finally determined by the Commission in this case.

5. For not having provided various items of information as explained above, the Commission has reduced the power purchase price by Rs.5 Crores as a penalty.

4.2.6 Merit Order Purchase

The Commission has already alluded to the present tariff structure for power purchase and explained that this is not on a rational two-part basis. This price structure, therefore, does not give proper signals for KPTCL to order its purchase of power on a rational merit order basis. Nevertheless, the Commission is of the opinion that, subject to such distortion as may be existing, the KPTCL should work out a plan for purchasing power on a merit order basis and strictly adhere to such plan. **This plan must be prepared for each month at least 15 days before the commencement of the month and got approved by the Commission**. The Commission will be monitoring the implementation of the merit order purchase plan on a monthly basis.

4.2.7 Fuel Escalation Charges

1. The KPTCL now charges 25 paise per unit as Fuel Escalation Charges in addition to the normal tariff for most categories of consumers. In the original filing, KPTCL had stated that this rate would be adequate for the year 2000-01. Subsequently, based on the validation carried out by the Commission, KPTCL was required to rework the figures. As per this reassessment, KPTCL has estimated the total amount of fuel escalation charges and purchase price adjustment relating to heavy water (charged by Madras Atomic Power Project) for the year 2000-01 as Rs.443 Crores. KPTCL has further stated that out of this amount of Rs.443 Crores, an amount of Rs.175 Crores that has been absorbed in the 1996 tariff revision has to be deducted. In order to recover the balance amount of Rs.268 Crores, KPTCL has estimated that the FEC surcharge on the tariff should be 33 paise in respect of the units estimated to be sold from October, 2000 to March, 2001. If FEC is retained at the same level of 25 paise, this would result in a short recovery of Rs.38 Crores over the year 2000-01.

2. The Commission has examined the filing carefully. Sub-section (10) of Section 27 of the Act provides that no tariff or part of any tariff implemented under sub-section (5) of the same section may be amended more than once in a financial year except in respect of any charges expressly permitted under the terms of any fuel surcharge formula as may be approved by the Commission.

3. The KPTCL's filing does not really include any proposal for a fuel surcharge formula. Such a formula would mean that a link is established between the fuel escalation charges paid to the generating companies and the tariff in such a way that the licensee is permitted to automatically increase the tariff based on such formula. However, as already mentioned above, KPTCL has not proposed any such formula but has merely required the Commission to determine a certain component of the tariff as attributable to the fuel escalation charges likely to become payable during the current year. KPTCL has estimated the fuel escalation charges to be paid to generating companies during 2000-01 by taking the weighted average unit rate of surcharge paid to generating companies from April to August, 2000.

4. As discussed in the section relating to power purchase quantity, there is still some uncertainty about the purchase of power from various sources. Consequently, the actual fuel escalation charges that may become payable would also be uncertain. At this point, therefore, the Commission is unable to approve any formula by which KPTCL will be entitled to automatically adjust the tariff to end consumers. The Commission therefore approves the continuance of the fuel escalation charge in the tariff @ 25 paise as it exists at present, pending further review. As and when the actual fuel escalation and heavy water charges paid to suppliers increases, the KPTCL shall be free to approach the Commission for a revision in the amount. The KPTCL may also propose a formula for this purpose as contemplated in the Act. As and when such a formula is placed before the Commission for approval, the Commission will consider the same following a transparent procedure.

4.3 Employee Cost

1. KPTCL has projected an employee cost of Rs.876 Crores on gross basis and Rs.856 Crores (net of capitalization) for 2000-01 as against Rs.802.26 Crores on gross basis and Rs.783 Crores (net) in the previous year. This amounts to an increase of 9.16 %. KPTCL has explained that this is based on the following assumptions :

1. Increase of 4 % in basic pay to provide for annual increments.
2. A 6 % increase in D.A. from July, 2000, i.e., for 9 months over and above the previous level of 38 %.
3. A 10 % increase has been built into terminal benefits. This includes a provision of 12½ % of salary towards contribution to a pension fund.
4. Other expenses are roughly at 1999-2000 levels.
5. A provision of Rs.11 Crores has been included for payment of bonus.
6. An amount of Rs.7 Crores (same level as in the past two years) has been included as staff welfare expenses. This amount is said to include a provision on account of the free / subsidized electricity provided to KPTCL employees.

2. The KPTCL's working strength has shown a decline over the last decade. The cost per employee has shown a compounded annual growth rate of 15.20 % in nominal terms and 5.25 % in real terms (after deflating nominal figures by the consumer price index) for the period from 1990-91 to 1999-2000. KPTCL in their presentation made to the Commission on 4.12.2000 have mentioned that there are over 19,500 vacancies, mostly at the field level, because of restriction on recruitment. These restrictions on recruitment together with steadily increasing scale of operations has resulted in much higher productivity than earlier, according to this presentation. KPTCL has contended that parameters such as number of employees per 10,000 installations, number of employees per 1,000 km. of transmission and distribution lines, establishment cost as a percentage of total cost and revenue per employee have all registered substantial improvements.

3. At the same time, the Commission has also examined comparative statistics relating to Karnataka and other States in India. There are certain inadequacies in the data that do not permit ready generalization about the extent to which KPTCL can be assessed as being above or below the All India average in respect of various parameters. The Commission, therefore, will take up this matter in greater detail during the course of the coming year in order to set up performance standards for various aspects of employee cost.

4. As far as the objections from the consumers are concerned, there have been a few important issues that have been highlighted by a large number of objectors. These are that

1. KPTCL staff are generally inefficient and discourteous to consumers.
2. KPTCL staff salaries are very high and in addition the staff have been provided the facility of free/subsidized electricity.
3. KPTCL staff are being paid bonus in spite of the critical financial condition of the organization.
4. Top level posts in KPTCL are being increased without due regard to the need for such posts.

5. Regarding changing the work culture and the attitude of employees towards consumers, the Chairman & Managing Director of KPTCL admitted that a change in the mind set of the employees was indeed essential and said that steps in this direction have already been initiated. As far as free lighting is concerned, KPTCL defended this practice on the following grounds :

1. There was an earlier attempt at stopping the provision of free / subsidized electricity and this had given rise to an industrial dispute that had ended in arbitration. As per the award of the arbitrator, this facility has been continued.
2. This facility has not been extended to employees recruited after 8/5/1997. Hence the number of employees who will continue to be eligible for this facility in future will steadily decline as older employees retire.
3. Not all eligible employees also avail this facility since certain conditions have to be fulfilled. As of 31st March, 2000, only 22,613 employees are availing this facility out of more than 35,000 employees in KPTCL recruited prior to 1997.
4. The concession is also limited only to the first 200 units; for consumption from 200 units to 280 units the employees are charged at 10 paise per unit, for consumption above 280 units and upto 400 units they are charged at 140 paise per unit, and for consumption above 400 units per month the normal charges apply. According to figures provided by the KPTCL, the consumption in 1999-2000 on this account was only 38.46 Mus and the revenue expenditure on availment of such concession was Rs.4.72 Crores (valuing the consumption at the tariff applicable to Domestic / AEH consumers as the case may be, without any fixed charges).
5. Employees of other organizations such as transport undertakings, railways, etc., are provided the facility of free / concessional travel. Hence there is nothing abnormal in KPTCL employees being provided free / subsidized electricity. A

similar concession has also been extended to the employees of KPCL.

6. The Commission has examined this issue in detail and has duly taken note of the serious objection to this practice expressed by a very large number of objectors. Many objectors have pointed out that such a concession has scope for wastage. Objectors have also pointed out that the limit of 200 units up to which electricity is completely free can also be manipulated since meter readers are themselves KPTCL employees and there would be a conflict of interest between their responsibility as meter readers and the concessions that KPTCL employees enjoy. It would not normally be part of the Commission's orders to prescribe that only specific items out of the package of allowances and other facilities given to employees would be allowed to be passed through in the tariff to consumers. The general approach of the Commission would be, on the contrary, to look into over all cost figures on establishment and to set up aggregate efficiency and productivity norms. While doing so, the Commission would also attempt segregating employee cost according to functions such as transmission, distribution, customer related expenditure, etc. Nevertheless, considering the wide spread objection from consumers to the facility of free/subsidized electricity being given to KPTCL employees, the Commission feels that this expenditure should not be allowed to be loaded on to the consumer tariff. The Commission will not allow a pass through of an amount of Rs.15 Crores under employee costs towards the free lighting provided to the employees at the rate of 200 units per month for 22613 employees at the average cost of supply of Rs.2.87 per unit. This Order of the Commission will not in any way hinder the KPTCL from fulfilling its contractual obligation to its employees.

7. As far as the payment of bonus and ex-gratia are concerned, KPTCL has estimated an amount of Rs.11 Crores under this head. The Commission has examined the question of whether KPTCL as an organization is obliged under the Payment of Bonus Act, 1965, to pay bonus to its employees. It appears that there is no such obligation. Besides KPTCL has followed the practice of paying the minimum bonus statutorily prescribed under the Payment of Bonus Act to all employees assuming that they are all eligible for bonus under the provisions of the Act. On the same lines as the reasons given above relating to provision of free / subsidized electricity, the Commission disallows passing through the amount of Rs.11 Crores into the consumer tariff. However, in this case also, the Order of the Commission will not in any way hinder the KPTCL from fulfilling its contractual obligation to its employees.

8. The actual DA increase with effect from 1.7.2000 has been only 3 % compared to the amount of 6 % built into the estimates. Hence an amount of Rs.9 Crores has been disallowed on this account.

9. The Commission notes that 333 posts in various cadres such as Accounts Officers, Assistant Executive Engineers, Executive Engineers, etc., have been created by the KPTCL between 1997-98 and 1999-2000. KPTCL has defended this saying that the number of additional posts sanctioned has been very meagre compared to the rapid expansion of activities. They have also added that the creation of these posts does not result in any great increase in expenditure since most officers who have been promoted have stagnated at the same pay levels and also since lower posts have been kept vacant. While there is an element of truth in these arguments, the Commission has also come across instances where posts at the highest levels seem to have been created without any justification. The Commission, therefore, advises KPTCL to avoid creation of any more higher level posts unless absolutely essential and justified.

10. The Commission therefore has taken the following amounts on account of employee cost into the aggregate revenue requirement.

Table – 23 : Employee Cost

Total as projected by KPTCL	**Rs.856 Crores**

Less : Free/subsidized electricity disallowed	Rs. 15 Crores
Less : Bonus	Rs. 11 Crores.
Less : DA overestimated	Rs. 9 Crores
Net	Rs.821 Crores

11. The amount of Rs.821 Crores allowed by the Commission includes the provision of Rs.50.38 Crores, at 12.5 % of basic salary, towards contribution to a pension fund. **The Commission directs KPTCL to transfer this amount to a separate bank account pending credit to the Pension Fund Trust.**

4.4 Repairs & Maintenance, Administration & General, Interest and Depreciation Expenses

1. Repairs & Maintenance and Administration & General Expenses

The licensee has filed expenditure figure of Rs.142 Crores (Rs.134 Crores after capitalization) towards the operation and maintenance. This includes the administrative & general charges and repairs & maintenance cost of both transmission & distribution systems. The repairs & maintenance of distribution system works out to Rs.67.69 Crores and the amount to be capitalized out of total expenditure is Rs.2.54 Crores The administrative & general charges of distribution system are estimated at Rs.66.15 Crores of which Rs.2.04 Crores is to be capitalized. The administrative & general charges of transmission system works out to Rs.6.14 Crores of which Rs.4.96 Crores is for capitalization. The repairs & maintenance cost of transmission system is estimated at Rs.2.27 Crores of which Rs.0.50 Crores is for capitalization. Except for the repairs & maintenance cost of distribution system which is estimated at Rs.67.69 Crores for the year 2000-01 as against Rs.60.30 Crores in the previous year, all other figures are equal to the previous year's actual expenses. The major deviation is in the expenses provided for repairs & maintenance of buildings to the extent of Rs.6.64 Crores which the Commission feels necessary considering the necessity of upkeep of civil structures. Therefore the Commission accepts the proposal of Rs.134 Crores towards the operation & maintenance.

2. Interest & Finance Charges

The licensee has provided Rs.500 Crores on a gross basis and Rs.443 Crores (net of capitalization) towards interest and finance charges for the year 2000-01 as against Rs.425 Crores on gross basis and Rs.347 Crores (net of capitalization) during 1999-2000.

3. Depreciation

The licensee has proposed a depreciation of Rs. 299 Crores for the year 2000-01 as against Rs.286 Crores during the previous year. The Commission has taken note of the assets of the licensee and accepts the figure of Rs.299 Crores. The Commission has also noted the notification of the Ministry of Power in this regard indicating the norms for depreciation.

4. Miscellaneous Expenses

The licensee has provided Rs.20 Crores towards the other miscellaneous expenses pertaining to previous year. The Commission will not permit this expense to be passed on to the consumer.

4.5 Total ERC as finalized by the Commission

Table – 24 : Expected Revenue from Charges (Rs. Crores)

Sl No	Item	As proposed by KPTCL *	As approved by KERC
1	Purchase of Power	4254	3695
2	Employee Cost	856	821
3	Operation & Maintenance	134	134
4	Interest & Finance charges	443	443
5	Depreciation	299	299
6	Other Expenses	20	-
	Total (net) Expenditure		**5392**

***** after capitalization

The above aggregate revenue requirement works out to an average cost of Rs.2.87 per unit on the estimated sales quantity of 18,766 MUs.

4.6 Capital Expenditure Review

1. KPTCL has presented a list of capital works with an outlay of Rs.911 Crores to the Commission. It is found that a very substantial portion of this amount of Rs.911 Crores represents outlay on works that are shown on ongoing and a very small portion thereof has actually been earmarked for new works which are to be taken up. In its review of KPTCL's investment plan, the Commission has issued directions to the KPTCL that detailed project reports of all capital works have to be submitted to the Commission for approval before these works are taken up. The Commission would be looking at the investment plan of the KPTCL in three stages. The first stage would be prior to taking up the projects, when the Commission would look at the cost estimates, the justification for the project, return expected from the project, funding pattern and sources, etc. At the second stage, the Commission would monitor the progress of all major capital works on a periodical basis. This will be essential for the Commission to satisfy itself that the works are proceeding according to the time and cost estimates. In the third stage, the Commission would be taking up post-completion audit of major capital works in order to assess the extent of deviation from original estimates, cost over runs, variation in actual benefits compared to original plans, changes in funding, etc., in order to decide on the extent to which the capital expenditure thus incurred can be justified for inclusion in the asset base.

2. The Commission had required the KPTCL to provide details relating to works completed during the past three years in order to assess the extent to which these works pass the test of prudently incurred capital expenditure. The Commission found that the information system used by the KPTCL was hopelessly inadequate and could not provide reliable information about capital works. There were several cases that the Commission came across where works that were delayed by long periods of time were shown as having been completed at a fraction of the original estimate. The Commission had, therefore, come to the conclusion that capital expenditure figures in respect of individual works were not accurate and that primary documents such as stores accounts, cost registers, etc., are not kept up to date. The KPTCL had also changed capital expenditure figures after initial discussion with the Commission. However, the Commission has not been convinced about the veracity and basis of such changes.

3. In Para 2.12 of the Tariff Filing where KPTCL has listed efforts to reduce costs, capital and revenue budgeting has been mentioned. KPTCL has said that strict budgetary control has been introduced in order to bring financial discipline in executing the capital works and to ensure expenditure within the budget provision. It has been mentioned that this strict budgetary control would enable the Corporation to reduce costs and minimize time over runs.

4. The Commission is convinced that the KPTCL is not making worthwhile effort in this direction. The Commission has evidence for believing that the capital investment programme of the KPTCL is being implemented without any regard to basic principles of sound finance.

5. To give a concrete illustration, KPTCL had required the Commission for approval to take up three works of T&D upgradation in Bangalore Metropolitan Area. These works had been recommended for urgent implementation by the Bangalore Agenda Task Force. On verification, the Commission found the following shortcomings:

1. Detailed project reports sent to the Commission for approval were based on the schedule of rates of 1997. These estimates had not been updated to take cost variation up to the year 2000 into account. It was obvious that KPTCL was taking up these projects without any proper idea about the expenditure that it would incur.
2. The estimates were inconsistent. For instance, the cost of transformers of the same capacity and description varied widely from one estimate to the other.
3. Standard procedures of cost estimation such as uniformly providing for transportation, insurance, erection charges, etc., had not been followed. Similarly interest during construction had been completely ignored.

6. The Commission has not yet received any response from the KPTCL in the matter of submitting revised detailed project reports, after rectifying the defects that were pointed out.

7. To give another example, the KPTCL when called upon to explain the over estimation of the works leading to huge savings has stated that "the project reports were prepared based on the information furnished by SIC and only lump sum provision was made in the projects. In respect of the transmission lines, the cost per KM were worked based on the estimated cost of material and labour without carrying out the survey in the actual route in which the lines have to be laid" [Lr. No.KPTCL/B36/5705/C/2000-01, Dated8.11.2000 from CEE/Regulatory Affairs/KPTCL].

8. As per the above statement, project reports do not seem to be based on actual field surveys and hence appear to be irrelevant. The Commission is forced to conclude that when nearly Rs.300 to Rs.400 Crores of major works are taken up every year on the basis of such unrealistic estimates, there cannot be any sensible cost control at all.

9. It is also observed that more than 50 nos. of REC schemes costing about Rs.220 Crores for which first instalment of loan amount was drawn during 1998-99 and 1999-2000 have not even started. The amounts drawn attract avoidable interest payments.

10. KPTCL also spends about Rs.300 Crores for service connection and distribution works. The works are large in number and the Commission has no details of such works. However, going by the state of accuracy with which the accounts are maintained and the non-monitoring of time and cost over runs strictly, as evidenced in review of major works, there is huge scope for overspending and possible misuse.

11. KPTCL's safety record also leaves a lot to be desired. There have been over 250 fatal accidents each year in the last 3 years. In the 6 months ending September 2000, the number of fatalities was 182. The Chief Electrical Inspector to Government, the statutory authority entrusted with the responsibility of investigating the causes of accidents, has prepared a detailed report identifying the reasons for accidents and the measures needed to prevent their occurrence. The Commission has been continuously pursuing this matter with KPTCL and asking for an action plan with definite time targets for implementing the CEIG's suggestions.

12. The Commission has noted with concern the objections of several petitioners, especially from the rural areas, of poor quality of supply, unreliability in power supply, shortage of power, etc. The Commission has also heard KPTCL on these issues. KPTCL proposes to invest Rs.13,500 Crores on strengthening of the T&D network. Of this, Rs.8,500 Crores is said to be for strengthening the transmission network and Rs.5,000 Crores is for the distribution network. The Commission has not been provided details of the capital investments included in these amounts. Neither has the Commission been furnished the assumptions on the basis of which the investment proposals have been worked out. Specific improvements in quality of service parameters that will be achieved with the implementation of each stage of this comprehensive investment proposal have also not been placed before the Commission. The Commission, through its interaction with the KPTCL on matters relating to investments as explained above, has adequate grounds to believe that this investment plan of KPTCL needs to be properly scrutinized and justified before the KPTCL goes ahead with its implementation. While permitting the investments, the Commission would be looking at specific bottlenecks in the T&D system, especially in the rural areas and efficacy of the proposed investments in removing those bottlenecks in short and medium terms. In a subsequent section, the Commission has proposed certain increases in the tariff for rural consumers that is likely to fetch a substantial additional income for the KPTCL. **The Commission, therefore, directs KPTCL to earmark the entire amount thus generated specifically for improving the T&D system in rural areas in addition to the amounts which is presently being spent so that tangible improvements in the quality of supply can be achieved.**

13. Under the above circumstances, the Commission issues the following directions :

i. **An appropriate procedure for prioritizing capital works should be drawn up by the KPTCL and got approved by the Commission. Works should be taken up only on the basis of this scheme of prioritization.**

ii. **Project cost estimates should be worked out on a realistic basis.**

iii. **Benchmarking of system parameters such as voltage, interruptions, system loss, etc., of the project area should be documented before taking up the work. This is essential to assess the improvement achieved after the execution of the project.**

iv. **Interest should be charged to individual works. Cost registers should be maintained and updated regularly and completion reports should be prepared immediately after completion of works.**

v. **No work estimated to cost more than Rs.1.00 lakh should be awarded without going through a process of competitive**

bidding to ensure the lowest cost to the licensee. No purchase or price preference should be allowed to any agency including public sector enterprises.

vi. **A special action plan, as explained above, for enhancing safety is to be worked out by KPTCL, duly identifying the capital investment required therefor. This action plan is to be submitted to the Commission for implementation within one month from the date of this order.**

vii. **KPTCL is to come up with a specific, time bound action plan for**

viii. **improvement of the T&D system in rural areas within three months from the date of this Order for the approval of the Commission. This investment programme should specifically commit KPTCL to a certain improvement in quality parameters in the areas where the investments are proposed compared with baseline benchmarks.**

Tariff Filing Analysis

5.1 1. In accordance with the provisions of Section 27 of KER Act, 1999, the licensee has filed the tariff amendment proposals with the Commission. The revenue expected from the sale of power, miscellaneous revenue and in the form of subsidy expected from the Government in the year 2000-01 as compared to the actuals for 1999-2000 is given below :

Table – 25 : Proposed Revenue for 2000-01 (Rs. Crores)

Particulars	**1999-2000 Actuals**	**2000-01 Estimate**
Sale of power	3,296.00	3,603.00
Miscellaneous revenue	245.00	180.00
RE subsidy	1,051.00	878.62
Total	**4,592.00**	**4,661.62**

2. Compared to the aggregate revenue requirement of Rs.6,006 Crores this discloses a gap of Rs.1,344.38 Crores. The KPTCL has proposed a tariff revision to cover a portion of this gap. According to the proposals, the annual revenue anticipated from the tariff revision is Rs.811.17 Crores, which amounts to an increase of 23.29 % over the current levels.

3. The proposals of the KPTCL relating to various categories of consumers have been examined by the Commission and the results of this analysis are presented in the following sections.

4. Before doing so it is necessary to deal with the preliminary points raised by several objectors. All these objectors have contended that the Government of Karnataka had, by a direction given to the erstwhile KEB in 1996, permitted the KEB to revise tariffs by only 13 % per annum. To the extent that the present proposal is for a tariff revision in excess of that percentage, the objectors contend that the tariff revision is illegal. The objectors also contend that the High Court of Karnataka has ruled that the KEB is bound by this directive of the Government.

5. KPTCL has contended that the Government directive in question referred to an overall tariff increase percentage; this does not prevent the tariff increase for any specific category of consumers from being more than 13 %. Further, the KPTCL contends that the directive of the Government of Karnataka was issued to the erstwhile KEB under the provisions of Section 78A of the Electricity (Supply) Act, 1948, and that this provision of law now stands superseded by the Karnataka Electricity Reforms Act, 1999. KPTCL further contends that the directive issued to the erstwhile KEB cannot be held to be binding on the KPTCL and that the present tariff application and determination by the Commission have to be guided solely by the provisions of the KER Act, 1999.

6. The Commission has examined this argument. It is true that letter No.DE 130 EEB 95, dated 21st June, 1996 from the Government of Karnataka to the then KEB conveyed the directions of Government, in exercise of its powers under Section 78A of the Electricity (Supply) Act, 1948, to the effect that the KEB was permitted to effect annual increase in tariff rates over and above the rates proposed in the annexure to that letter by 13 % w.e.f. from 1st April, 1997 onwards to enable the KEB to meet the increase in its operational costs and to cover the annual quantum of inflation. The KEB had sought to increase the tariff w.e.f. 1st July, 1996. The Government's directions contained in the letter quoted above, also approved the revision of tariff w.e.f. 1st July, 1996.

7. The legal position now existing is that Section 78A of the Electricity (Supply) Act, 1948 stands superseded by the provisions of the KER Act, 1999 to the extent that the latter Act has made specific provisions [vide clause (f) of Sub section (3) of Section 58 of the KER Act, 1999]. Government's powers to issue directives under the KER Act are contained in Section 12. These powers are restricted to issue of policy directives consistent with the objectives sought to be achieved by the KER Act in such a manner as to not adversely affect or interfere with the functions and powers of the Commission. The first proviso to Section 12 specifically lays down that the functions and powers of the Commission relating to determination of the structure of tariffs for supply of electricity to various clauses of consumers is not to be adversely affected by any policy directive issued by the State Government. The determination of tariffs by the Commission is as per the guidelines included in the Act in Section 27. The Commission, therefore, cannot be considered to be bound by the directive given earlier to the erstwhile KEB.

8. In any case, the contention of the objectors that the specific percentage included in the directive should hold for all time to come is not a reasonable one. The Government directive itself shows that the purpose of the tariff revision was to enable KEB to meet the increase in its operation costs and to cover the annual quantum of inflation. These are matters that need to be assessed on the basis of actuals from time to time. It cannot be contended that a single number fixed some years ago for this purpose would have to be rigidly applied for all time to come. Both under law and in terms of reasonableness, therefore, the Commission does not find any justification for the objections put forth by several objectors.

9. As far as the orders of the High Court of Karnataka on this issue are concerned, the KPTCL has brought to the notice of the Commission the orders of the Division Bench of the High Court in writ appeals No.8107 – 8132/99 to the effect that the order passed by the single judge directing the Board to revise and reconsider the 1997 tariff in so far as LT-5 installations are concerned is stayed. Consequently there does not appear to be any order of the High Court that is currently operative to restrict the annual increases in tariff to 13 % annually.

5.2 Bhagya Jyothi / Kutir Jyothi LT-1(a)

Table – 26 : Proposed Tariff for LT-1(a)

No.of consumers : 1703704
Connected load : 174006 kW
Consumption in MUs : 368

Sl. No.	Details	Existing (as per 1998 tariff)	KPTCL Proposal
1.	Energy charges	Rs.2.50 per month per installation	Rs.2.50 per month per installation
2.	Recovery of capital loan portion	Rs.3.30 per month per installation.	Rs.3.30 per month per installation.
3.	Revenue from energy charges	Rs. 5.11crores	Rs. 5.11 crores
4.	Total Revenue including recovery towards caplital loan portion	Rs. 10.91 crores	Rs. 10.91 crores

1. KPTCL has proposed to meter all BJ and KJ installations and apply the tariff applicable to LT-1(b) [domestic lighting category] when the consumption of any installation exceeds 18 units in a month.

2. BJ scheme was started in the late 70's as a single bulb installation for the benefit of the poorer sections in the State. At that time, an energy charge of Rs.2.50 per month was recovered. An amount of Rs.1.61 per month was also recovered as a charge towards the investment made in extending the facility. The table below shows the amounts charged under the BJ scheme ever since its inception :

Table – 27 : Amount Charged Under BJ Scheme Since Inception

Period	Energy Charge Per Month (Rs.)	Fixed Charge Per Month Towards Investment (Rs.)	Total (Rs.)
01.10.1979 to 01.02.1981	2.50	1.61	4.11
01.02.1981 to 01.04.1981	2.15	1.61	3.76
01.04.1981 to 18.08.1981	2.15	2.19	4.34
18.08.1981 to 04.09.1986	2.11	2.19	4.30

04.09.1986 to 02.05.1987	2.11	2.60	4.71
02.05.1987 to 04.06.1992	2.50	2.60	5.10
04.06.1992 to 31.01.1993	2.50	2.80	5.30
30.01.1993 to 13.01.1998	2.50	3.05	5.55
13.01.1998 till date	2.50	3.30	5.80

3. BJ installations are estimated to consume 18 units per month. However, the actual consumption of these installations is not known since these are all non- metered installations. KPTCL has reported that some of these customers at least are likely to be consuming more than 18 units per month and many objectors, especially the urban consumers have also pointed out to this. KPTCL has come up with the proposal to meter all these installations progressively and charge them at domestic charges when consumption exceeds 18 units per month.

4. The metering plan indicated by KPTCL for BJ installations is as follows :

Table – 28 : Proposed Metering Plan for BJ / KJ

Year	% of BJ/KJ installations to be covered
2000-01	5
2001-02	25
2002-03	30
2003-04	40

5. The 5 % of installations proposed to be covered in 2000-01 is KPTCL's estimate of BJ/KJ installations with more than a single light bulb. The KPTCL does not have any data at present on the socio economic profile of BJ consumers. In the absence of any such information, it is not possible to come to any conclusion about whether all the BJ consumers as at present are in need of continuing subsidies. KPTCL has said that Institute for Social Economic Change, Bangalore has been entrusted with conducting a Study on the BJ programme and that the report is expected by December, 2000. **The Commission directs KPTCL to submit this Report promptly within two months from the date of this Order**. It is clear that the rates charged for BJ installations have been kept very low levels for several years now. An amount of Rs.2.50 per month in terms of the price levels of 1979 when the scheme was introduced would today work out to Rs.11.84, merely adjusting the figure for the impact of inflation (4.74 times as per WPI). While the best solution would be to meter all installations and apply domestic charges beyond the level of 18 units per month, it is clear that even this will have to wait for about three years before it is implemented as per KPTCL's metering programme. Even this appears to be too ambitious and costly a programme.

6. KPTCL's current tariff for BJ consumers comprises two parts. An energy charge of Rs.2.50 per month is levied and an amount of Rs.3.30 per month is levied in addition for capital recovery. This amount is towards recovery of the standard amount spent on servicing the installation. Though this later amount of Rs.3.30 per month is shown as recovery towards capital charges, the same seems to be treated as an income item by the KPTCL in its accounts. The filing does not disclose how many of the BJ consumers have completed the period of 15 years fixed for the capital portion recovery and are currently paying only Rs.2.50 per month. Considering all these facts, the Commission is of the opinion that it would be advisable to increase the rate for BJ and KJ consumers to a total amount of Rs.10 per month per installation including recovery towards capital loan portion. At today's price levels, this amount is not more than Rs.2.11 per month in terms of 1979 price levels when the scheme was initiated. The average cost of supply for 2000-01 has been estimated at Rs.2.87 per unit. A consumption of 18 units per month would cost Rs.51.66. The tariff of Rs.10 per month that is now being proposed is only 19.4 % of the average cost of supply. The following table shows the steady increase in BJ installations in the State :

Table – 29 : Bhagyajyothi Installations 1990 to 2000

(Fig.in Nos.)

Sl. No.	Year	Target	Achievement
1.	1990-91	25000	16853
2.	1991-92	25000	25984
3.	1992-93	200000	189275
4.	1993-94	200000	178500
5.	1994-95	200000	182500
6.	1995-96	200000	163693
7.	1996-97	200000	131605
8.	1997-98	200000	135473
9.	1998-99	200000	140763
10.	1999-2000	200000	148391

7. The village-wise limit for BJ / KJ installations has also been increasing steadily over this period as can be seen from the following table :

Table – 30 : Villagewise Target of Bhagyajyothi / Kutirjyothi from 1984 up to 2000

Sl. No.	Year	No.of beneficiaries per village
1	Till 1984	10
2	1984-86	15
3	1986-91	20
4	1991-92	30
5	1992-94	75
6	1994-97	100 per village / 1000 per rural constituency
7	1997-2000	250 per village / 1000 per rural constituency
8	2000	300 per village / 1000 per rural constituency

8. The Commission also notes that the DCB of this tariff category shows substantial arrears as at the end of the year 1999-2000. These figures are as follows :

Table – 31 : Arrears of BJ / KJ Consumption (Rs.Crores)

Opening Balance	**Demand for the year 1999-2000**	**Collection**	**Closing Balance**
31.65	11.53	1.72	41.46

9. The Commission is conscious of the fact that a mere increase in the rate would not be of any use if the amount due thereby is not promptly collected. **The Commission, therefore, directs KPTCL to ensure that the rate now approved by the Commission for the BJ and KJ installations is levied and collected promptly**.

5.3 LT-1(b) Category

1. This is a category where the vast majority of installations are households. The present and proposed tariffs in this case are as per the following table. KPTCL has proposed merger of tariff category LT-1(c) relating to religious institutions, government schools, etc., with this tariff category.

Table – 32 : Proposed Tariff Table for LT-1(b)

No.of consumers : 4952716
Connected load : 1420929 kW
Consumption in MUs : 1727

Sl.No.	Details	Existing (as per 1998 tariff)	Proposed (2000-01)
1.	Fixed charges	LT1(b): Rs.20 / kw or part thereof of sanctioned load for 2 months LT1[c]: Rs.32/kw or part thereof sanctioned load for 2 months	LT1(b): Rs.30 / kw or part thereof of sanctioned load for 2 months
2.	Energy charges	LT1(b): i) 100 paise per unit upto 100 units / 2 months ii) 135 paise per unit from 101-300 units/ 2 months iii) FEC at 25 paise per unit When the consumption in 2 months exceeds 300 units, the entire consumption will be billed at LT2(a) tariff LT1[c]: i) 120 paise per unit upto 100 units / 2 months ii) 150 paise per unit 101-200 units / 2 months iii) FEC at 25 paise per unit When the consumption in 2 months exceeds 200 units, the entire consumption will be billed	LT1(b): i) 140 paise per unit upto 100 units / 2 months ii) 250 paise per unit upto 101-200 units / 2 months iii) FEC at 25 paise per unit When the consumption in 2 months exceeds 200 units, the entire consumption will be billed at LT2(a) tariff LT1[c]: Merged with LT1(b)

		at LT2[c] tariff	
3.	Revenue from fixed charges (Rs. Crores)	LT1(b) : 59.43	LT1(b) : 89.15
4.	Revenue from energy charges including FEC (Rs.Crores)	LT1(b): 218.90	LT1(b): 294.46
5.	Total Revenue (Rs. Crores) :	278.33	383.61

2. There have been several objections from consumers relating to the tariff proposed by KPTCL for this category. These objections are essentially on the following points :

I. There is no justification for levying a fixed charge or increasing the same.

II. The existing tariff provides that consumption in excess of 300 units per two months would shift the consumer to the LT-2(a) category. This threshold is now proposed to be reduced to 200 units for two months. Such a reduction would affect consumers who possess even a few domestic appliances. One of the objectors, Sri K.S. Manjunath, has submitted calculations during the course of the public hearing to show that even households that have such appliances as TV, refrigerator, mixer-grinder, would need monthly consumption of about 120 units and where a washing machine is also used, the monthly consumption would be around 130 units. He has, therefore, argued that the present threshold level of 300 units for two months should be retained. However, the objector has not said anything to justify why he should be supplied electricity below the cost of supply and how the utility can afford it.

3. The Commission has considered these objections carefully.

4. In the section dealing with subsidy and cross subsidies, the Commission has already adverted to the low levels of average consumption in this category, especially in rural areas of the State. The Commission has also explained why, in the Commission's opinion, a consumer who is able to invest in the necessary equipments for consuming relatively large quantities of electricity does not have a case for being supplied electricity at lower than the cost of supply. The Commission has accordingly proposed to fix the consumption level of 30 units per month as the level up to which a lifeline rate shall apply and charge approximately 75 % of the average cost of supply of energy for consumption in this category. Where consumption exceeds 30 units per month, the Commission is of the opinion that, as far as energy charges are concerned, there should not be any difference between a consumer under the LT-1(b) category and LT-2(a) category. However, the LT-1(b) category of consumer will pay a lower fixed charge on his sanctioned load.

5. Taking the above factors into account, the Commission has fixed the following tariff for LT-1(b) category.

Fixed Rs.20 per kw or part thereof of sanctioned load for 2 charge months (i.e., Rs.10 per month)

Energy For the first 60 units of consumption 125 paise per unit
charges in a period of two months

For next 140 units of consumption 205 paise per unit (above 60 units up to 200 units) for units in excess of in a period of two months 60 units in a period of 12 months

FEC 25 paise per unit

Where consumption exceeds 200 units in two months, the entire consumption will be billed at LT-2(a) tariff.

5.4 LT-1(c) category

1. This tariff category covers largely religious institutions and schools, colleges, etc., run by the Government. There are 34,827 connections under this category. The existing rates for this category are higher than the rates applicable to LT-1(b) category. KPTCL has proposed merging this with LT-1(b) category. Since the existing rates for LT-1(c) are higher than LT-1(b), the merger of LT-1(c) with LT-1(b) will result in a lower increase in the rate for consumers in this category than would have been the case if the same percentage increase were applied to both categories.

2. In view of the tariff structure proposed for LT-1(b) now by the Commission under which the first 30 units of consumption in a month are to be charged at a lower rate, the merger of LT-1(c) with LT-1(b) would also give the old LT-1(c) consumers the same benefit. The Commission has not received any objections to this proposal. Hence the Commission agrees with the proposal for merger of LT-1(c) with LT-1(b).

5. LT-2(a) Category

1. This category is commonly referred to as AEH category and is applicable to combined lighting and heating, though it is applicable also to hospitals, dispensaries, etc., run by State or Central Government or local bodies and institutions meant for handicapped, aged and destitutes, orphans, etc. There are a total of 13,28,449 connections in this category with a total connected load of 34,04,861 kw. The existing as well as proposed tariffs in this category are as follows:

Table – 33 : Proposed Tariff for LT-2(a)

No.of consumers : 1328449
Connected load : 3404861 kW
Consumption in MUs : 2025

Sl. No.	Details	Existing (as per 1998 tariff)	Proposed (2000-01)
1.	Fixed charges	LT2(a): Rs.13 / kw subject to min. of Rs.40 PM.	LT2(a): Rs.20 / kw subjected to min. of Rs.60 PM.

2.	Energy charges	LT2(a): i) 160 paise / unit upto 200 units / PM ii) 230 paise / unit from 201-300 units PM iii) 290 paise / unit from 301-400 units PM iv) 400 paise / unit above 400 units v) FEC at 25 paise per unit	LT2(a): i) 250 paise / unit upto 100 units / PM ii) 325 paise / unit from 101-300 units PM iii) 400 paise / unit from 301-400 units PM. iv) 450 paise above 400 units PM. v) FEC at 25 paise per unit
3.	Revenue from fixed charges (Rs. Crores)	LT2(a): 63.77	LT2(a): 95.65
4.	Revenue from energy charges including FEC (Rs.Crores)	i) 344.66 ii) 30.98 iii) 6.38 iv) 8.61	i) 406.52 ii) 177.19 iii) 8.61 iv) 9.62
5.	Total Revenue (Rs. Crores)	454.39	697.58

2. The important changes that KPTCL wishes to bring about in this case are –

a. Ensuring that consumers in this category pay approximately the average cost of supply.
b. Reduction in the first slab from 200 units to 100 units.

3. Apart from the general point made about fixed charges to which the Commission has adverted earlier, the objectors have raised the following points specifically about the proposed LT-2(a) tariff.

i. The first slab should not be reduced from 200 units to 100 units.
ii. As the consumption level increases, there is no justification for steep increases in the tariff.
iii. AEH consumers in rural areas should not be charged the same rates as in urban areas since there is scheduled rostering of power supply to restrict supply to IP sets.

4. The Commission has considered these objections. As far as the modification in the upper limit for the first slab is concerned, the Commission would be guided by the overall principle of trying to ensure that customers in this category pay at least the average cost of supply. In line with the Commission's basic principles discussed in section-3 above, there does not appear to be any justification for providing supply to these consumers at a rate lower than the average cost of supply. The Commission would therefore like to adjust the slab in such a way that this objective is achieved. Since there is a fixed charge of Rs.60/- minimum that is proposed to be levied by the KPTCL, there will have to be an increase in the energy charge at higher consumption levels in order to offset the reduction in the fixed charge per unit that comes about at those consumption levels. The Commission has accordingly calculated the slabs and the rates to be charged for each slab.

5. As far as the issue of rural AEH consumers is concerned, the Commission finds considerable merit in the arguments of objector Sri Ananda Theertha Rao of Manchenahalli, Gowribidanur and others to the effect that rostering of IP sets results in rural AEH consumers not being able to utilize power for several hours in a day. While KPTCL tried to counter this objection by saying that the inability to consume would be reflected in lower energy charges, this response of the KPTCL does not answer the point about why the fixed charge should be the same in rural areas as they are in urban areas. The Commission is of the opinion that those who are on rural feeders subject to rostering should be charged lower fixed charges since power supply would not be available for at least six hours per day between 6 am and 6 pm. The total number of such consumers is not accurately known as per the KPTCL's statistics. However, this is not likely to exceed 2 lakhs.

6. Considering all the above factors, the Commission has fixed the following tariff for the LT-2(a) category :

Fixed Rs.20/- per kw subject to a minimum of Rs.60/- per charges installation per month.

For consumers who obtain supply from rural feeders subject to rostering, fixed charges will be Rs.15/- per kw per month of sanctioned load without any minimum amount.

Energy 205 paise per unit for the first 100 units;

Charges 255 paise per unit for the next 100 units (from 101 to 200 units);

300 paise per unit for the next 100 units (from 201 to 300 units);

350 paise per unit for the next 100 units (from 301 to 400 units);

425 paise per unit for the balance units (above 400 units).

FEC at 25 paise per unit

7. Indian Railways have also submitted objections relating to LT-2(a) category. Railways are availing LT supply under LT-2(a) category at many wayside stations to cater to staff quarters. Since a number of staff quarters are connected to one single connection, the Railways have contended that invariably they have to pay at the highest slab for a major portion of the consumption even though individual occupants consume less than 100 units per month. As against this, Railways state that they realize from their staff at domestic tariffs and thereby incur huge losses.

8. Railways have subsequently brought to the attention of the Commission the procedure followed in Andhra Pradesh. They have mentioned that APSEB have agreed for billing of bulk energy supply to quarters on the basis of average monthly consumption per quarter.

9. The Commission finds that the claim of the Railways is justified. **The APSEB procedure of billing under respective slabs based on the average monthly energy consumption per each authorized dwelling, that is, total energy consumption in the month divided by number of dwellings in such month is approved for implementation.**

5. LT-2(b) Category

1. This tariff category covers private professional and other private educational institutions, whether aided or unaided.

The total number of institutions in this category is 2,726. At present, this category is charged a tariff that is substantially higher than the LT-2(a) tariff but lower than LT-3 category. The data provided by KPTCL regarding the number of consumers, connected load, annual consumption and annual demand pertaining to this category are inconsistent. The DCB statement for the year 1999-2000 (Form-21(A) of the filing) discloses a total consumption under LT-2(b) category of 5.145 MUs with a corresponding demand of Rs.288.03 lakhs. This works out to an average demand of Rs.5.60 per kwh. The comparative figures of average demand for LT-2(a) and LT-3 categories in 1999-2000 were Rs.2.47 and Rs.6.50 per KWH respectively. However, the Commission notes that the average demand of Rs.5.60 per unit seems to be high when compared to the tariff schedule. Perhaps this is caused by inclusion of interest on delayed payment also under the annual demand.

2. Further, the Commission notes that the average consumption in this category in the year 1999-2000 was approximately 200 units per installation per month.

3. As can be seen from the above figures, the proposal of the KPTCL, if accepted, would lead to an increase in the average rate per unit payable by this category of consumers of approximately 90 paise per unit.

4. The Commission has received a number of objections from educational institutions contending that they are performing a valuable social service and are not always operated on commercial lines. They have therefore objected to being clubbed with commercial installations.

5. The Commission has considered all the above issues in detail. Taking all these factors into account, the Commission is of the opinion that there does not exist any case for merging this category with LT-3. Besides, since the average rate of realization from this category is higher than the cost of supply as at present, **the Commission does not approve of any modification in the tariff applicable. The existing tariff will continue to apply.**

6. LT-2(c) Category

This tariff schedule is applicable to religious institutions, hospitals, etc., run by charitable institutions and schools, colleges and educational institutions run by the State / Central and local bodies. There are 2,886 institutions in this category. The rate presently charged is above that charged under LT-2(a) category. The total consumption in 1999-2000 under this category was 11.5 MUs. The average demand was Rs.4.25 per unit which again appears to be somewhat high taking the tariff structure into account. KPTCL has proposed merger of this category with the LT-2(a) category. There have not been any objections to this proposal and **the merger with LT-2(a) is accepted by the Commission on the same basis as the merger of LT-1(c) with LT-1(b) category**.

7. LT-3 Category

1. This category covers commercial lighting, heating and motive power. There are approximately 8.22 lakh installations under this category with a sanctioned load of 419.3 MW. This category currently provides one of the highest rates of revenue for the KPTCL. The average demand in this category in 1999-2000 was Rs.6.50 per unit. KPTCL has not proposed any change in the tariff for this category since the rates are already high.

2. As explained in detail in the section relating to subsidies and cross subsidies, the Commission has noticed that there are a number of small installations that come under this category as well. With the high minimum fixed charges and the energy charges applicable, it has been shown that the rate per unit at a consumption level of 20 units per month works out to Rs.7.90. At a consumption level of 30 units per month this rate works out to Rs.6.73 per unit. These average rates are higher than even the HT industrial tariff. Tariff making cannot proceed under assumption that all consumers in this category are affluent consumers who must be charged rates that are substantially higher than the cost of supply in order to cross subsidize other consumers. Division-wise analysis of the average consumption per installation per month under LT-3 category in the year 1999-2000 reveals that 15 out of 46 divisions show an average consumption per installation of 30 units per month or less. In terms of average connected load per installation, there are 27 divisions out of 46 that have an average connected load of 0.3 kw or less. Where the fixed charge per kw is Rs.35/- per month, the Commission feels that it would be an unjust burden for consumers with such low connected loads to pay a minimum of Rs.70/- per installation per month, irrespective of the connected load.

3. In keeping with the general principles outlined in preceding sections, **the Commission approves the KPTCL proposal to retain the same tariff structure for LT-3 with one significant modification namely that the fixed charges would be @ Rs.35/- per kw or part thereof per month without any stipulation of a minimum amount**. This measure would go towards making the average rate paid by the smaller LT-3 consumers closer to the average cost of supply.

4. **The Commission approves the clubbing of LT-6(c) category relating to private advertisement signboards with LT-3**.

8. LT-4 Category

1. This tariff schedule applies to agricultural pump sets, water supply and sewerage pumping installations and plantations and nurseries. At present there are several sub-divisions within this category. These are as follows :

1) LT-4(a) – applicable to irrigation pump sets, nurseries of Forest and Horticulture department, grass farms and gardens and plantations other than coffee, tea, coconut and arecanut. Under this sub-category there are two divisions, namely -

LT-4(a)(i) – up to and inclusive of 10 HP and

LT-4(a)(ii) – above 10 HP.

2) LT-4(b) – applicable to water supply and sewerage pumping. Under this there are three sub-categories, namely -

LT-4(b)(i) – applicable to water supply and sewerage pumping installations of village panchayats, taluk panchayats, town municipalities and organizations run on charitable basis.

LT-4(b)(ii) – applicable to similar installations of city municipalities, corporations, State and Central Government and APMC yard installations.

LT-4(b)(iii) – applicable to water supply installations in private residential layouts.

3) LT-4(c) – applicable to private horticultural nurseries, coffee, tea, coconut and arecanut plantations.

2. Apart from changes in the rates, KPTCL have also proposed one change in the classification. Coconut plantations which are currently under LT-4(c) are now proposed to be brought under LT-4(a). No specific grounds have been given by KPTCL in support of this change.

As far as LT-4(a)(i) is concerned, the rate is proposed to be increased from Rs.300/- per HP per annum to Rs.500/- per HP per annum of sanctioned load.

3. As has been discussed earlier in the section relating to estimation of consumption by IP sets, there is a considerable uncertainty caused by non-availability of reliable data in so far as the consumption by IP sets on an average is concerned. However, at the figure of 6,223 units per IP set that has currently been used by the KPTCL, and assuming an average IP set capacity of 5 HP, the existing rate works out to 24 paise per unit. At the proposed rates, this will go up to 40 paise per unit. The following shows the increase in cost of the KPTCL since the last tariff revision in June, 1998.

(Paise per KWH)

1. 2000-01

Cost of power purchase 103 136

Cost of supply 246 286

4. The increase of 16 paise in the average revenue does not cover even the increase of 33 paise in the average cost of power purchase since the last revision. The average cost of supply for the year 2000-01 as worked out by the Commission is approximately Rs.2.87 per unit. Even the proposed rates would result in a subsidy per unit of supply to IP sets of approximately Rs.2.46 per unit. On the total supply of 7,343 MUs estimated for 2000-01, the gross subsidy that is being extended to IP sets works out to approximately Rs.1,800 Crores. This subsidy, it must be noted, is computed only on the basis of the average cost of supply.

5. Government of Karnataka have not provided adequately in the budget for this entire amount of subsidy nor they have committed themselves in this behalf in the hearing on 8.12.2000 when Principal Secretary, Energy Department, appeared before the Commission. Therefore, if a part of the subsidy is to be met by cross subsidies from other categories of consumers, the Commission has to take substantial care to ensure that, as far as practicable, those IP set consumers who are clearly not eligible to be subsidized by virtue of their paying capacity are removed from the scope of subsidy provision. The Commission would have been greatly helped in this regard had the KPTCL conducted a survey of the IP set consumers and come up with some credible data on the economic status of various segments of IP set consumers. However, this is unfortunately not available and the Commission, therefore, has had to resort to other methods for better targeting of subsidies. The Commission will be issuing detailed guidelines separately for conducting a Study to obtain the economic profile of IP set consumers.

6. Objectors representing IP set consumers have been very critical of the KPTCL for the poor quality of services provided to this category. Objectors have complained about low voltage leading to burning out of motors, scheduled as well as unscheduled interruptions, long delays in rectifying outages, power not being available at convenient times in the day, shortage of power in the peak agricultural season, etc.

7. Objectors have also drawn the Commission's attention to the high level of T&D loss and the substantial amount of theft that has been covered in T&D loss. There has been a suggestion that untapped hydel potential be harnessed and that domestic and agricultural users be exclusively provided hydel power.

8. Several objectors from Dakshina Kannada district have said that arecanut cannot be treated as a commercial crop. They have also pointed out that very often, arecanut is not grown exclusively and that it is mixed with other crops like paddy and that therefore having a separate tariff for arecanut plantations alone would not be capable of being implemented practically.

9. The Nurserymen's Cooperative Society, Bangalore, has also objected about clubbing private horticultural nurseries with plantations and charging them the highest rates under this Tariff Schedule. They have contended that no distinction can be made between agriculture and horticulture and thereafter charge higher rates for horticulture. KPTCL in response to this objection has stated that though both horticulturists and agriculturists use IP sets, their end products are not the same and therefore horticultural nurseries cannot compare themselves with general agriculturists. KPTCL further has quoted a decision of the High Court of Karnataka in writ petition no.12742/91 decided on 11th October, 1996 to the effect that horticulture nurseries are purely commercial ventures with an objective of exploiting advanced techniques in the field of horticulture and making profit by running on commercial scale. Hence, KPTCL contends that they cannot be compared to agriculturists using electricity simply for irrigating fields.

10. The Commission also has to take note of the Common Minimum National Action Plan that has been agreed to by all State Chief Ministers in 1996 of charging at least 50 paise per unit in respect of every category of consumers including IP set consumers with a progressive increase to reach at least 50 % of the cost of supply in three years time.

11. The Commission has, in the absence of any data, attempted to use certain proxy indicators for identifying those IP set consumers who need to be brought out of the category eligible for subsidies. The Commission notes that there are several farmers in rural areas who have assets such as tractors, cars, etc., and who have also been able to obtain telephone connections. There is hardly any reason to continue to provide them with subsidies. The Commission therefore proposes to bring out the following IP set consumers from the category eligible for subsidies :

1) Those IP set consumers who have more than one IP set connection covered under the LT-4(a)(i) category as per the pre-revised tariff;

2) Any income tax payer under the Income Tax Act, 1961;

3) Owner of a tractor;

4) Owner of a 4-wheeled motor vehicle;

5) Any person who has a telephone connection including mobile telephone.

12. In respect of IP set consumers falling in any of the above categories, the Commission is of the opinion that, to start with, a rate equal to at least the cost of power purchase should be charged. This rate is presently Rs.1.35 per unit. The Commission also will be bringing up the rate charged to these categories of consumers to the applicable cost of service over a period of five years.

13. The Commission notes that the KPTCL has also admitted the unsatisfactory quality of power supply in rural areas. KPTCL's response to rural problems has been inadequate. The Commission recognizes that something tangible needs to be done in order to improve the quality of supply. At the same time, the Commission cannot accept the argument of objectors that increases in tariffs should be made only after the quality of supply improves. The Commission has in the section relating to review of capital expenditure, already indicated that a certain sum of money that is likely to be generated by the increases in tariffs for the agricultural sector that are now being approved by the Commission should be earmarked specifically for improvement of the T&D system in the rural areas. The tariffs now approved by the Commission are also nowhere near the cost of service. Improvements in the quality of supply as well as increases in tariffs to take them to the cost of service in about five years time have to occur simultaneously. It is not practical to hold back increases in the tariffs until the quality of service has improved to acceptable levels.

14. As far as the objections relating to arecanut are concerned, the Commission notes that KPTCL has contended that the supplier has the authority under law to classify and reclassify consumers for the purpose of tariff fixation and that there is nothing illegal or arbitrary in this. KPTCL has further contended that since arecanut is a crop akin to coffee and tea, these crops are classified together. Further, KPTCL has argued that arecanut installations cannot be treated on par with large agricultural consumers and that the objectors cannot now question the classification as it is prevailing since 1st July, 1997 and that they had so far not questioned the classification and that they have been paying on the same basis.

15. Considering all these points, the Commission is of the opinion that both arecanut and coconut be continued in LT-4(c) category.

16. As far as the objection of the Nurserymen's Cooperative Society, Bangalore about private horticultural nurseries is concerned, the Commission concludes that these nurseries, being run on commercial lines, are not to be considered as eligible for any subsidies.

17. In view of this, the Commission proposes to change the categories under LT-4 category as follows :

Table – 34 : Approved Tariff of LT-4

LT-4(a)	For IP sets up to 10 HP	50 paise per unit subject to a minimum of Rs.300/- per HP per year. Till meters are fixed, a flat rate of Rs.45/- per HP per month shall be charged.
LT4(b)	For IP sets up to 10 HP in respect of consumers who fulfils any one of the conditions listed at Sl.No.1-5 [para 11 of 5.9]	Rs.1.35 per unit subject to a minimum of Rs.600 per HP per year. Till meters are fixed, a flat rate of Rs.75/- per HP per month shall be charged.
LT-4(c)	IP sets above 10 HP	Rs.1.35 per unit subject to a minimum of Rs.800/- per HP per year.
LT-4(d)	For private horticulture nurseries, coffee, tea. Coconut and arecanut plantations	Rs.1.75 per unit plus FEC at 25 paise per unit subject to a minimum of Rs.600/- per HP per year.

18. The Commission notes that though the earlier LT-4(c) category pertaining to private horticultural nurseries, coffee, tea, coconut and arecanut plantations were required to be charged on a metered per unit basis, KPTCL does not appear to have implemented metered billing. **The Commission directs KPTCL to ensure full implementation of metered billing in all cases ordered by the Commission.**

19. The existing installations under LT-4(b)(i) and LT-4(b)(ii) will be clubbed with LT-6 relating to streetlights and this is being dealt within a subsequent section.

20. As far as LT-4(b)(iii) relating to water supply to private layouts is concerned, this category is to be merged with LT-6(b) since the nature of service provided is similar.

21. The Commission does not have precise statistics about the number of IP set consumers who are likely to fall within any of the five categories listed above. Data from the Motor Vehicles Department available with the Commission indicate that number of tractor owners alone could be more than one lakh. However, for the purpose of assessing the likely revenue from this category of consumers, the Commission would not like to include any specific figure. **KPTCL is directed to report to the Commission, within three months from the date of this Order, the number of consumers who have been classified as LT-4(b) in terms of this Order.**

5. LT-5 Category

1. This category includes industrial and non-industrial, heating and motive power including lighting. There are a total of 3,25,030 connections under this category with a total connected load of 27,92,197 HP. For tariff application purposes there are five sub-categories in so far as the fixed charges are concerned and four sub-categories in so far as the energy charges are concerned. KPTCL has proposed merging two of the categories under fixed charges namely 40 to 50 HP and 51 to 66 HP and reducing the number of categories to four, both for fixed charges and energy charges. An average increase of 29 % in the tariff of LT-5 as a whole has been proposed.

2. The Commission notes, as has been discussed in the earlier sections, that there is a large number of very small units also in this category. While the average sanctioned load per installation is 8.6 HP, the Commission notes that 84 % of the total number of installations have a sanctioned load of below 10 HP. The average load of this category is very low at 4.35 HP per installation. The average consumption per installation per annum is 362 KWH taking all the sub-categories into consideration. However, for the installations with sanctioned load of 10 HP and less the average consumption per consumer per month is only 141 units.

3. Given the present tariffs, the total bill for a consumer with a sanctioned load of 5 HP and an average consumption of 140 units per month would be as follows :

Fixed charges Rs.110/-

Energy charges 140 units @ Rs.2.35 per unit Rs.329/-

Total Rs.439/-

Average cost per unit Rs.3.14

4. In line with the Commission's basic philosophy regarding subsidies and cross subsidies, the Commission feels that there is a definite case for providing some measure of relief, in comparison to the tariffs proposed by KPTCL, to installations having a sanctioned load up to and inclusive of 5 HP.

5. Accordingly, the Commission orders a change in the sub-categories under LT-5 category, as follows :

1. Up to and inclusive of 5 HP;
2. Above 5 HP and below 40 HP;
3. 40 HP and above but below 67 HP; and
4. 67 HP and above.

6. Taking into consideration the revised figures of revenue requirement as approved by the Commission, the following rates for the various sub-categories are approved by the Commission.

Table – 35 : Approved Fixed Charge Tariff of LT-5

HP	Fixed Charge per HP
Up to 5 HP	Rs.25 per HP of sanctioned load
Above 5 HP and below to 40 HP	Rs.30 per HP of sanctioned load
40 HP and above and below 67 HP	Rs.40 per HP of sanctioned load
67 HP and above	Rs.100 per HP of sanctioned load
Demand based tariff (optional)	
Above 5 HP and below to 40 HP	Rs.60 per KW or part thereof per month
40 HP and above and below 67 HP	Rs.80 per KW or part thereof per month
67 HP and above	Rs.175 per KW or part thereof per month

7. A number of LT consumers have already got fixed tri-vector meter though billing is not made on the basis of MD indicated by tri-vector meter. The Commission wishes to encourage use of tri-vector meter for LT also because of the obvious advantages. The important advantage is that the consumer can arrange his load and pay for actual MD recorded. Hence, Commission has introduced MD based tariff at the option of the consumer. The MD rates are indicated above. The consumer may get his sanctioned load reduced to his requirement.

8. As far as energy charges are concerned, the Commission does not see any reason to have the same slabs as for the fixed charges. Energy charges should be the same for a specific level of consumption irrespective of the sanctioned load category into which a consumer falls. Accordingly, the following energy rates have been approved by the Commission.

Table – 36 : Approved Energy Charge Tariff of LT-5

Consumption (in KWH per month)	Rate (Rs.)
Up to 200	2.25
Next 800 (201-1,000)	2.75

Next 3000 (1001 to 4000)	3.00
Balance (above 4,000)	3.25
FEC	0.25

9. There have been objections from industrial consumers in rural areas that industries who draw their power from rural feeders are subject to rostering by which power is not available for at least six hours a day between 6 AM to 6 PM. They have therefore contended that the charges levied on them should reflect this curtailment of supply. The Commission sees merit in this argument. Accordingly, the Commission agrees to a rebate of Rs.10 per HP of sanctioned load in the fixed charges payable per month in case the LT-5 connection in question draws power supply from a rural feeder, i.e., a feeder subject to scheduled rostering. As and when the scheme of rostering is either given up or supply to the concerned LT-5 consumer is shifted to another feeder not subject to rostering, this rebate will not be provided.

10. The Commission has also noted that in a number of cases such as bakeries, ice cream parlors, etc., the consumer has two separate meters – one meter relates to the production activity and is charged under LT-5 category while the consumption of power in the shop which is used for selling the products is charged under the LT-3 category. Very frequently these are located adjacent to each other in the same building or shop. Such a classification of demand into industrial and commercial is administratively very cumbersome and could also lead to undesirable practice in view of the major difference in rates between these two categories. The Commission, therefore, would like to avoid this situation by permitting LT-5 consumers to also use energy from the same connection for commercial purposes up to a limit of 1/10th of the sanctioned load for industrial purposes.

5. LT-6 Category

1. This relates to streetlights and public lighting that are not metered as at present. KPTCL has estimated the total consumption by these categories on the basis of a norm of 360 units per month per kW of connected load. The KPTCL has proposed an increase in the flat rate from Rs.300 per kW per month to Rs.500 per kW per month in respect of village panchayats and TMCs and from Rs.450 per kW per month to Rs.800 per kW per month in respect of CMCs and Corporations. If metered, a levy of Rs.1.20 and Rs.2.00 per unit is proposed for village panchayats & TMCs and CMCs & Corporations respectively. The Commission would like to merge categories LT-4(b)(i) with LT-6(a) and LT-4(b)(ii) with LT-6(b) category.

2. The classification will be LT-6(a) dealing with water supply and street lighting of village panchayats and TMCs and LT-6(b) dealing with water supply and streetlight of CMCs and Corporations.

14. While the water supply installations are already metered, **the Commission directs KPTCL to implement metering of the streetlight installation within a period of one year.** Tariffs approved by the Commission for each of the categories are as follows :

Table – 37 : Approved Tariff of LT-6

	Fixed charges	Energy charges

LT-6(a)	Rs.15 per HP/Rs 20 per KW per month	i) Street lights- Rs. 1.20 per unit ii)Water supply and sewerage pumping–Rs.1.75 per unit plus FEC of 25 paise per unit.
LT-6(b)	Rs. 30 per HP/Rs 40 per KW per month	i) Street lights- Rs. 2/- per unit ii)Water supply and sewerage pumping–Rs.2.50 per unit plus FEC of 25 paise per unit.

15. Pending metering of streetlight installations, the following flat rates will be applicable :

LT-6(a) Rs.500 per KWH per month

LT-6(b) Rs.800 per KWH per month

6. **LT-7 Category**

1. This relates to temporary power supply. The current rates are 605 paise per unit subject to minimum of Rs.100 per kW or part thereof of the sanctioned load per week. KPTCL has proposed to increase this to 650 paise per unit subject to minimum of Rs.150 per kW or part thereof per week.

2. This tariff schedule as at present also provides for temporary supply to be extended for duration of not more than fifteen days without fixing of a meter. In such a case, fixed charges computed on the basis of 12 units per day per kW or part thereof of the sanctioned load are calculated based on the above rates. **The Commission is of the opinion that non-metering of these connections leads to misuse. The Commission therefore directs that all temporary installations be metered**. As far as the rates are concerned, the Commission feels that the rates presently being charged are quite high and that the increase proposed by the KPTCL is really not justified. After consideration of all the factors, the Commission approves a rate of 600 paise per unit subject to a minimum of Rs.125 per kW or part thereof of the sanctioned load per week.

3. HT-6 Category (temporary supply) - This category will not be continued as a separate category. All temporary connections are to be given only under LT supply. LT temporary supply of 67 HP and above load should be charged Rs.200 per HP per month or part thereof by way of fixed charges and energy charges of Rs.6 per unit.

7. **HT-1 Category**

1. This tariff category covers public water supply and sewerage pumping installations and is applicable to these installations belonging to Bangalore Water Supply and Sewerage Board (BWSSB) and Karnataka Urban Water Supply and Sewerage Board (KUWSSB), other local bodies, State and Central Government. Demand charges of Rs.130 per KVA of billing demand per month plus energy charges of Rs.2.10 per unit plus FEC at 25 paise per unit for all the units consumed is now being levied. KPTCL has proposed increasing the demand charges to Rs.150 per KVA and energy charges to Rs.2.80 plus FEC of 25 paise per unit.

2. The major objector in this category is the BWSSB. The BWSSB has submitted an elaborate objection petition. In this petition, the entire gamut of issues relating to KPTCL's functioning has been covered. Hydro thermal mix, power purchase, T&D losses, subsidies and cross subsidies, customer mix and consumption pattern, efforts to improve quality, reliability and customer service, approach to tariff revisions, etc., have all been adverted to.

3. Subsequently relating to BWSSB, the objector has contended that electricity charges represent more than 53 % of the annual expenditure and 68 % of the operating expenses of the BWSSB. The objector has said that of the total water provided, 39 % goes to domestic consumers who comprise 93 % of the customer connections and 75% of metered connection. BWSSB has said that the scope for cross subsidy in water charges has been completely exhausted.

4. In the rejoinder, the KPTCL has answered in detail all the points made by the BWSSB. Since the objection of the BWSSB cover the entire gamut of the functions of the KPTCL, the various points raised in the objections relating to power purchase cost, agricultural consumption, T&D losses, subsidies and cross subsidies, other expenditure, etc., have all been examined in detail in the preceding sections. The Commission’s conclusions about the extent of revenue requirement that can be allowed has also been indicated.

5. The Commission has examined the objections of the BWSSB carefully. The total consumption under HT-1(b) category is projected to be 622 MUs. This is expected to be fetch a total revenue of Rs.175.80 Crores before revision, at an average rate of Rs.2.83 per unit. The KPTCL has proposed a 26 % increase in the rate for this category. This would bring the average rate of Rs.3.57 per unit. As has been explained above, the average cost of supply for 2000-01 is estimated now at Rs.2.87 per unit. All the installations in the HT-1 category are public water supply and sewerage pumping installations belonging to either BWSSB , or the KUWSSB or other local bodies of the State and Central Governments. All these bodies themselves have a large burden of subsidies to bear, caused by the need to provide the essential services of water supply and sewerage pumping to all sections of the community. As has been clearly pointed out by BWSSB, the scope for cross subsidizing in the tariff of these bodies is also very limited. In this context the Commission does not think that the electricity tariff to this category should be a source of funds for cross subsidization. At the same time, the average cost of supply should be charged to this category.

6. Considering all the above factors, the Commission approves the following rates for HT-1 category :

Demand charges Rs.150 per KVA per month of billing demand

Energy charges Rs.2.30 per unit

FEC 25 paise per unit

7. The Commission estimates that this tariff structure would make the average cost of energy to this category approximately equal to the average cost of supply.

5.14 HT-2(a) and HT-6

1. HT-2(a) tariff schedule applies mainly to industries, though it also covers other installations such as Universities and Educational Institutions run by Government and local bodies. The present charges are Rs.150 per KVA of billing demand per month plus energy charges in three slabs. KPTCL has proposed to retain the demand charges at Rs.150 per KVA per month but has increased energy charges by 30 paise per unit in each slab.

2. The consumption of this category of consumers as a percentage of total energy sales has been declining over the years. The reason attributed to this decline is switching over to captive generation by industries. Power cuts imposed on this category, unreliability in power supply, poor quality and the steadily increasing rates being charged to these consumers in order to provide for cross subsidies have led to a situation where installation of captive generation capacity has become necessary. In order to provide an incentive for industries to come back to the grid, KPTCL is also operating a scheme by which consumption above a certain level is charged at Rs.3.25 per unit, inclusive of FEC. KPTCL has proposed continuation of this scheme even after the tariff revision.

3. As has been made clear in the section dealing with ERC Analysis, the Commission's appraisal of the ERC Filing indicates that the average cost of supply would now stand at approximately Rs.2.87 per unit compared to Rs.3.35 per unit as in the original filing. Taking all these factors into account, the Commission approves the following rate structure for the HT-2(a) category :

Fixed charges Rs.150 per KVA per month of billing demand

Energy charges Rs.3.25 per unit up to one lakh units

Rs.3.75 per unit for the balance units

FEC 25 paise per unit

4. HT-6 category covers power supply for railway traction. The current charges are Rs.128 per KVA of billing demand per month in the form of demand charges and energy charges of Rs.2.90 per unit plus FEC at 25 paise per unit for all the units consumed in a month. KPTCL has proposed increase in demand charges from Rs.128 to Rs.150 per KVA of billing demand per month and energy charges from Rs.2.90 to Rs.3.55 per unit plus FEC at 25 paise per unit for all the units consumed in a month.

5. Railways have objected to the tariff increase proposals on the following grounds :

1. Supply to the railway is at 220 KV level. Hence the scope for transmission losses is absolutely minimal. There are also no commercial losses.
2. The railways contend that tariffs in other States in India for railway traction are lower than Karnataka. They have said for the high railway traction tariffs in Karnataka have resulted in hampering the sanctioning and execution of railway electrification projects in the State.
3. The railway demand is at a constantly high level throughout the period of 24 hours.
4. Railways get EHT supply at Bangarpet and Whitefield with a contract demand of 9,000 KVA and 7,000 KVA respectively. In case of failure of supply at one location, the feed is extended from the other. Railways have complained that when such feed extension takes place resulting in the contract demand being exceeded, railways are penalized for such excess demand. They contend that this is unfair since on several occasions the switching of stations is due to KPTCL problems.

5. The 3 MMD paid by railways is a large amount and it does not earn any interest.

6. Railways have therefore contended that there is no justification for raising the traction tariff beyond the present rate. They have also mentioned that Andhra Pradesh, Tamilnadu and Kerala are charging railways @ Rs.4.20, Rs.3.40 and Rs.1.12 per unit respectively with minimum demand charges of NIL, Rs.150 and Rs.116 per KVA respectively. Regarding shifting of demand, the railways have subsequently produced a copy of an order of the TNEB to the following effect :

1. Where the excess demand arises due to transfer of loads on account of reasons attributable to the Board the billing for demand charges towards excess demand is to be restricted to the day(s) of occurrence only on proportionate basis at normal charges.
2. If the excess demand is attributable to the railways themselves, penal levy is to be levied for such excess demand.

7. The railways have requested that a similar procedure may be adopted in respect of excess MD recorded in one installation whenever the feed is extended on account of failure of EHT line or shut down taken for normal maintenance.

8. As far as the tariff for the railways is concerned, the Commission cannot be guided by rates in force in other states. This is because the Commission has to look at the specific costs of power generation, purchase and cost of supply applicable to Karnataka. However, a comparison of rates in force in other states where the railways are large consumers of power, as extracted from the tariff orders of the respective Commissions, with the rates in Karnataka shows the following :

Table – 38 : Railway Traction Tariff in Other Three States

Gujarat	Maharashtra	Uttar Pradesh
Demand charges : Rs.160 per KVA Energy charges : Rs.4.55 per unit for the entire consumption in a month Rebate for supply at 132 KV 1 % Consumption : Estimated at 396 MUs in 2000-01	Demand charges : NIL Energy charges : Rs.4.20 per unit for the entire consumption Consumption : 843 MUs in 2000-01	Demand charges : Rs.135 per KVA Energy charges : Rs.3.95 per unit Consumption : 910 MUs in 2000-01

9. The Commission, therefore, is of the opinion that even if the argument of the railways about comparability with other States is examined, Karnataka's tariffs for railway traction cannot be said to be high.

10. Taking all the above factors into consideration, the Commission directs that railway traction be included as part of tariff HT-2(a) since there does not appear to be any need for a separate category exclusively for the railways. Energy charges for the railways however will remain at Rs.3.25 per unit plus FEC at 25 paise per unit irrespective of the quantum of power consumed in a month.

11. As far as issue of penal charges for demand arising out of shifting of loads from one station to other station is concerned, the Commission directs that procedure similar to that of TNEB explained above be followed.

12. HT-6 is merged with HT-2(a), hence there will be no HT-6 category.

15. **HT-2(b) Category**

This is a tariff applicable to commercial consumers. It also includes private educational institutions and unaided educational institutions. The present tariff is Rs.180 per KVA of demand with energy charges ranging from Rs.3.75 to

Rs.4.30 per unit plus FEC at 25 paise per unit. KPTCL has retained the fixed charges at the same level in their proposal. Energy charges are proposed to be levied at Rs.4.30 per unit for the entire consumption plus FEC at 25 paise per unit. The Commission approves the following rates :

Fixed charges Rs.180 per KVA of demand

Energy charges Rs.4.00 per unit for the first two lakh units per month

Rs.4.30 per unit for the balance units in a month

16. **HT-3 Category**

1. There are two sub categories under this tariff schedule.

2. HT-3(a) is applicable to irrigation and agricultural farms, lift irrigation schemes / societies and government horticultural farms. The charges applicable at present are Rs.0.80 per unit subject to a minimum of Rs.115 per HP per quarter year. KPTCL proposes to increase this to Rs.1.50 per unit subject to a minimum of Rs.800 per HP per year.

3. This proposal has been severely objected to by the Belagavi Jilla Raitha Neeravari Yojanegala Maha Mandali and also by the Ugarkhurd Sahakari Neeravari Sangha Niyamit. The basic objection of these objectors is that the members of these cooperative societies are individually small farmers with small land holding. Even at the present rates, the bill per farmer works out to be substantially more than what it would be if each individual farmer were to be considered as a separate consumer. The objectors have therefore requested for a flat rate tariff.

4. The Commission has considered this objection very carefully. While it is true that, in the present scheme of things, farmers who join together to form a cooperative society end up paying collectively more than what they would have paid had they taken individual connections from the KPTCL, the Commission also is of the opinion that the present situation is difficult because of an extremely distorted tariff structure that needs to be very soon rectified. The Commission is not in favour of switching over from a metered tariff to a flat rate tariff. Such a step would be retrograde. However, considering the objections and also the revised revenue requirement, now worked out by the Commission, a rate of Rs.1.35 per unit subject to a minimum of Rs.800 per HP per annum is approved by the Commission.

5. HT-3(b) applies to private horticulture nurseries, coffee, tea and coconut and arecanut plantations. There appears to be very small consumption under this category. KPTCL has proposed to increase the energy tariff from Rs.1.50 per unit plus FEC of 25 paise per unit subject to a minimum of Rs.125 per HP per quarter year to Rs.2.75 per unit plus FEC of 25 paise per unit subject to a minimum of Rs.800 per HP per year. No objections have been received and the Commission approves the KPTCL proposal.

5.17 HT-4 Category

This relates to power supply to the Hukkeri Rural Electricity Cooperative Society. This is essentially a bulk tariff that is to be fixed for supply to a licensee. The Hukkeri Society has filed its objections to the proposal of KPTCL. The Commission will be taking up the proposal for the bulk tariff after finalizing the present order. Pending fixing of a separate bulk tariff for the Hukkeri Society, the Commission orders that the present tariff be allowed to continue until revision.

5.18 HT-5 Category

1. This is a category to provide for temporary power supply. The Commission notes that this category is practically non-operational and orders that this category be deleted. All temporary power will be released under LT-7 category.

2. HT-6 category has been merged with HT-2(a) .

5.19 HT-7 Category

This tariff schedule applies to residential apartments and colonies availing power supply independently. The present tariff is demand charges of Rs.73 per KVA of billing demand per month and energy charge of Rs.2.30 per unit plus FEC at 25 paise per unit for the number of units consumed in a month. KPTCL has proposed to increase the demand charge to Rs.75 per KVA and energy charge to Rs.2.85 per unit plus FEC at 25 paise. There are 84 connections in this category. No objections have been received from any of these consumers. The Commission approves KPTCL's proposal. This category is re-designated as HT-5 as the earlier HT-5 and HT-6 categories have been discontinued for the reasons explained above.

5.20 3 M.M.D

1. A number of objectors have raised objections about the practice followed by the KPTCL of collecting security deposit and further of not paying any interest on the deposits thus collected. Regulation 31.01 of the Electricity Supply Regulations, 1988, provides that an initial security deposit has to be collected from all prospective consumers to cover three months power supply bills worked out on the basis of estimated consumption as per the table given in the said regulations, or three months line minimum charges, whichever is higher.

2. Regulation 31.02 further provides that after the installation is serviced, if the deposit held falls short of three times the average of one year bill amount of the preceding financial year, the difference shall be payable by the consumer as additional security deposit.

3. The amount of deposit was earlier equal to two months power supply bills up to 1986 and has been increased to three months bills with effect from 1986. The KPTCL has contended that the collection of three months security deposit as well as not paying interest thereon is legally admissible in view of the decision of the Supreme Court in Ferro Alloys Corporation Ltd. V/s Andhra Pradesh State Electricity Board case (AIR 1993 Supreme Court 2005).

4. In view of this specific decision of the Supreme Court, the Commission cannot agree with the contention of objectors that the collection of 3 MMD without paying interest is illegal.

5. The KPTCL contends in line with the reasoning of the Supreme Court, that the deposit is in the nature of advance consumption charges and that going by the operational cycle of the electricity sector, a period of three months elapses between the incurring of expenditure by the KPTCL and the collection of charges for the electricity supply. KPTCL has further brought to the notice of the Commission that the High Court of Karnataka in writ appeal 6438/99 has upheld the deletion of the provision in the ESR which earlier provided for payment of interest. KPTCL has therefore contended that consumers cannot now demand interest on the 3 MMD. The Commission has, at this stage, not gone into the issue of whether factually the operational cycle of the KPTCL is such as to result in a period of three months elapsing before power charges for electricity supply are in fact collected. At this point the Commission would only like to say that the whole issue is a matter that will be subject to detailed examination by the Commission and appropriate orders would be passed on this matter separately after hearing all the parties in detail.

5.21 High Voltage Rebate

The existing rebate for high voltage consumers is extended to such consumers only for a period of 5 years from the date of service. The Commission does not see any rational grounds for restricting such a rebate to only 5 years from the date of service. It is expected that the transmission and distribution losses in the case of supply at high voltage is much lower than at lower voltages. Therefore the Commission orders that the high voltage rebate be given at the current rates of 1 paise per unit for 33/66 KV class; 2 paise per unit for 110 KV class and 3 paise per unit for 220 KV to consumers who draw power at these voltages irrespective of the date of service. In other words this rebate will be available without any such time limit of 5 years from the date of service. This will be not applicable to the Railways.

5.22 Grid Support Charges for Captive Generating Sets:

1. This is a new levy that KPTCL now proposes to impose. This is proposed to be levied at 20% of demand charges applicable for HT industrial (i.e., HT-2(a) category) consumers on the synchronized capacity of captive generating sets in KVA. The reason given by the KPTCL is that the Grid supports the Consumers' fluctuating loads and variations in captive generation.

2. This levy has been objected by the M/s Rajashree Cement. Other objectors have also stated that far from causing an additional burden to the grid, synchronization of captive generating sets improves the stability of the grid.

3. KPTCL has not identified any additional expenditure that it is forced to incur as a result of such synchronization. It has also not provided any calculation to justify the figure of 20% of demand charges that it now proposes to levy. At the hearing of objections relating to this issue, Director (Transmission) of KPTCL was specifically required to explain the rationale and calculations behind the figure of 20%. No explanation for this number was provided.

4. KPTCL has proceeded on the ground that consumers who synchronize with the grid derive some benefits thereby. The Commission, however, does not think that this is a valid basis for tariff determination. In the Commission's opinion, tariffs have to be determined on the basis of identifiable costs that the KPTCL incurs in providing a service. Benefits that the consumer gets from out of the connection or the utilization of electricity are matters which are extraneous to tariff determination. The Commission is therefore unable to accept KPTCL's proposal for levy of grid support charges for captive generation sets. This will be considered separately by the Commission after due examination of the entire issue.

5.23 Billing and Collection Efficiency

1. KPTCL's ERC and Tariff filings are based on the assumptions that billing efficiency and collection efficiency are each 100%. In other words KPTCL's calculations are on the basis of 100% billing of all the quantities of power sold and 100% collection of the amounts thus billed.

2. The Commission does not have any data to come to any conclusion about billing efficiency. However, it would appear that this is not at 100% since the measures suggested by the Board of Directors of the KPTCL to increase revenue include ensuring 100% billing, opening of pending test reports, replacement of not recording meters etc. The Commission will be issuing separate directions to the KPTCL to set up a system for obtaining data on billing efficiency and periodically reporting the same in order to monitor the actuals. As far as collection efficiency is concerned, the KPTCL has reported that the total amounts due from various categories of installations as on 30.9.2000 was Rs.1,172.94 Crores (principal and interest included). The category wise amounts are as per the following table :

Table – 39 : Amounts due to KPTCL from various categories

of Consumers as on 30.09.2000

Sl.No	Categories	Amount in Rs.Crores
1	Central Government/Public Undertakings	84.98
2	Irrigation Pump sets	473.95
3	KUWS&DB (Karnataka Urban Water Supply & Drainage Board)	47.37
4	BWS&SB(Bangalore Water Supply & Sewerage Board)	129.70
5	Grama Panchayats	120.33
6	CMCs/TMCs/Corporations	13.92
7	Bhagya Jyothi & Kuteera Jyothi	46.40
8	PWD Lift Irrigation Schemes, etc.	15.68
9	Other State Government Undertakings	10.48
10	Private Consumers (Others)	230.13
	Total	**1172.94**

3. Both in the objections as well as in the hearings, a number of consumers have contended that the KPTCL has extremely large arrears due from consumers and that if all these arrears were properly recovered, there would be no necessity for tariff revision. The KPTCL had responded to this by saying that a very substantial portion of arrears represents dues from Local Bodies, Government Undertakings/Essential Services and that these are connections that cannot be easily disconnected. As far as the dues from Private Consumers of Rs.230.13 crores is concerned, KPTCL has mentioned that a sum of Rs.45.67 crores and Rs.18.99 crores respectively pertain to court cases and appeals and that the net amount due is only Rs.165.47 crores. Out of this amount of Rs.165.47 crores, a further amount of Rs.110.36 crores pertains to a single case where a certain instalment facility has been provided by the Government. The substance of KPTCL's rejoinder, therefore, is that there is no truth in the objection of various consumers to the effect that recovery of arrears would obviate a tariff revision.

4. The DCB Statement for the year 1999-2000 shows the following percentages of collection in respect of some important consumer categories where KPTCL has expressed difficulties about using coercive methods to enforce recovery:

Table – 40 : Percentage of Collection and Outstanding Details

Category	Description	% age collection on Annual Demand	% age collection of OB + Annual Demand
LT-1(a)	Bhagya Jyothi/Kuteera Jyothi	14.94	3.99
LT-4(a)(i)	Irrigation Pump Sets	38.73	16.11
LT4-(b)(i)	Water supply to Village Panchayats	53.91	26.85
LT4-(b)(ii)	Water supply to City Municipalities and Corporations	103.25	60.17
LT6-(a)	Public Lightings Village Panchayats	82.32	31.86
LT-6(b)	Public Lighting CMCs and Corporations	84.29	56.20
HT1	Public Water Supply	164.00*	64.41.

* This high percentage is because of a one time "Securitisation" of dues done by the KPTCL.

5. Government has been deducting at source from the transfer of funds to local bodies and paying to the KPTCL. However, this practice does not seem to be adequate to meet the requirement.

6. After removing the effects of such one time actions as the Securitisation of dues, the Commission calculates that approximately 95% of the current demand is recovered by the KPTCL. Non-recovery of the remaining 5% of the demand would mean an additional resource gap of approximately Rs.200 crores. **The Commission directs that to the extent that there is a shortfall in recovery of dues from Government Departments/State Public Undertakings/Rural and Urban local bodies, the amount of such shortfall has to be added to the total subsidy that is to be made good by the Government**. The Commission has come to this opinion because the finances of these bodies are largely controlled by or subject to the influence of the Government. The Electricity Sector should not be made to bear the burden of the funds shortages of these bodies.

7. The Commission also directs KPTCL to publish the list of the top 50 defaulters in each Sub Division. This may be done in local newspapers at the Sub-division or Divisional level as may be convenient. The publication may be done once in six months. KPTCL is directed to file returns once in every six months about having published the list of defaulters in the newspapers. Publicity may also be given on the notice board of the respective offices.

5.24 Demand Side Management (DSM):

1. One of the functions of the Commission is to promote economy in the use of electricity in the State and the efficient utilization and conservation of energy. The Commission is to look into appropriate demand side management and reduction of waste and losses in the use of electricity (Clause (b) of Sub-Section (1) of Section 11 of the KER Act, 1999).

2. The Commission notes that the KPTCL's Tariff Filing does not mention anything at all about demand side management. While the Commission agrees that rationalization of energy charges so as to make them more reflective of the cost of service would be a measure of demand side management since this would provide some incentive for conservation, the Commission is of the opinion that KPTCL should look at demand side management as a means of bridging the gap between availability and supply.

3. Solar Water Heaters

KPTCL currently offers a rebate of 5 paise per unit in respect of LT-2(a) category consumers if Solar Water heaters are installed and used. The Commission has received two types of objections to the continuation of this rebate:

1. Some objectors have said that the present rebate of 5 paise per unit is inadequate and does not provide a strong incentive for installing solar water heaters. They have argued that this rebate needs to be increased to 15 paise to 20 paise per unit.;
2. Some objectors have said that this rebate should not be limited to only solar water heaters but should be extended to solar lighting applications as well.

4. The Commission has considered these objections and agrees that the rebate of 5 paise per unit that is now offered is inadequate. In this connection the Commission notes that the KPTCL has dismissed the request of consumers saying that they are unable to consider extending concession beyond 5 paise in respect of AEH installations having solar water heaters. This response of the KPTCL does not provide any ground for rejecting the request of consumers. KPTCL needs to conduct proper studies to determine the extent to which installation of solar water heaters contributes to reducing peak demand. Such a study would be essential to provide a scientific basis for any rebates to be given to consumers with solar water heaters. A rebate granted without any such study would be purely ad hoc. Nevertheless the Commission feels that an increase in the rebate would be justified immediately even at an ad hoc basis, pending carrying out of a study as mentioned above. The Commission therefore increases the rebate for using of solar water heaters to 15 paise per unit. **KPTCL is directed to conduct a detailed study to estimate the actual quantity of benefit to the system as a result of installation of solar water heaters.**

5. KPTCL has also not mentioned anything in its tariff proposals about introduction of time of day metering and tariffs based on time of day usage. Karnataka has a large hydel component in its generation capacity. Besides some more hydel projects that are designed to operate as peak load stations are currently being considered for implementation. In this context it is essential that KPTCL actively consider the cost benefit analysis of implementing time of day tariffs as an alternative to contracting for new peak load capacity. However, the Commission desires that KPTCL make operational the time-of-day feature of the tri-vector meter fixed to all HT installations. It is desired that licensee declares the peak and off-peak periods and start reading the demand for off-peak and peak periods separately. Certain concessions in penalty for exceeding contract demand have been noted in the general conditions to tariff order enclosed.

5.25 Metering Policy

1. The following categories of consumers are currently not metered:

Table – 41 : Details of the Non-metered Consumers

Sl. No.	Categories	No.of connections
1	LT-1(a) – Bhagya Jyothi/Kuteera Jyothi	17.04 lakhs
2	LT-4(a)(i) – IP Sets below 10 HP	11.65 lakhs
3	LT-6(a) – Street Lights	Not furnished

2. KPTCL has drawn the attention of the Commission to the Government Order No.DE/84/EEB/99 dated 21.6.2000 which includes the following paragraph:

"(6) Energy Audit at all levels and loss reduction programme – A comprehensive metering programme is a pre-requisite for control of leakage in the electricity supply. KPTCL shall take up a programme of universal metering of all own installations and of all categories of electricity consumers, as part of energy audit and loss reduction programme to be completed within a period of 3 years".

3. KPTCL has mentioned in the tariff filing that all Bhagya Jyothi and Kuteera Jyothi installations would be metered. The schedule for metering has already been extracted in Section 5.2 above.

4. KPTCL's own estimate of Bhagya Jyothi installations that have more than one light bulb connection is only 5%. Metering of all Bhagya Jyothi connections has to be justified on a cost benefit basis. The Commission notes that the Government Order dated 21.6.2000 also talks about metering of all categories of consumers in the context of introducing energy audit at all levels and for implementing loss reduction programme. The Commission is not yet convinced that metering of all Bhagya Jyothi connections would be a practical and economically justifiable programme. The Commission therefore directs KPTCL to first examine the options available in order to identify possible alternatives to universally metering all Bhagya Jyothi installations. **This study may be completed within a period of 3 months from the date of this order. The KPTCL shall obtain the approval of the Commission for the implementation of any such alternative**.

5. As far as the metering of Street Light installations and IP sets are concerned, the Commission notes that KPTCL's tariff filing does not mention anything whatsoever about a programme for achieving the same. The Commission is clearly of the opinion that, given the large quantities of power consumed by these installations, it is extremely essential to complete metering of all these installations at the earliest. **KPTCL is accordingly directed to submit to the Commission for approval a metering programme for metering of IP sets and street light connections. This programme has to be submitted within 3 months from the date of this order**.

6. The Commission also notes that KPTCL has not included any proposal in its tariff filing to take advantage of the latest technological developments available in metering. With large number of installations now to be brought under metering, the Commission is clearly of the opinion that doing this in the same manner as hitherto, but on a much larger scale, is likely to lead to substantial inefficiency and misapplication of funds. KPTCL needs to actively look at various technology alternatives so that the entire process of metering, reading of meters, billing, etc., is rendered as effective and as economical as possible. The Commission would also like to suggest a provision for domestic consumers to switch over to pre-paid meters. KPTCL needs to work out a system by which the charging of these meters is rendered easy so that domestic consumers are not put to inconvenience as regards payment of bills. KPTCL stands to gain from this process since the money is collected in advance of consumption and maintenance of ledgers and accounting can also be done away with. As a measure of encouraging people to switch over to Pre-paid meters, KPTCL can refund the Security Deposit collected from such consumers. The Commission would also like to recommend to the KPTCL for serious consideration the possibility of having common administrative arrangements for meter reading and collection of dues between the Water Supply Organization and KPTCL.

5.26 Rebate for Extra Consumption

1. KPTCL is currently operating a scheme by which HT Industrial and HT Commercial consumers are supplied Electric energy at a cost of Rs.3.25 per unit and Rs.4.00 per unit respectively (inclusive of fuel escalation charges) if their consumption is above the highest consumption recorded in the previous one year. KPTCL has specifically mentioned in the tariff filing that this incentive of supplying at Rs.3.25 per unit would be continued. Presumably this refers to the consumers in the HT-2(a) category. There is nothing mentioned in the tariff filing about consumers in the HT-2(b) (i.e., Commercial) category.

2. Since the average cost of supply as now worked out by the Commission is approximately Rs.2.87 per unit, the Commission agrees to the continuation of the scheme for supply to HT-2(a) consumers at Rs.3.25 per unit.

5.27 Concessions to Seasonal Industries

1. KPTCL has proposed a concessional tariff to Agro based seasonal industries subject to certain terms and conditions. Essentially the concession involves charging fixed charges and energy charges during the working season months while only energy charges are to be paid during the off season months. This is subject to the further condition that if the power charges paid during the period fall short of the higher of annual line minimum charges and the 12 months fixed charges, the deficit should be paid by the consumer during January of the succeeding year.

2. The Commission has not received any objections relating to this particular concession. However, the Commission is of the opinion that this scheme goes against the entire principle of levying a two part tariff. The need for a fixed part in the tariff in order to recover the fixed charges incurred in the system has been explained at length in the preceding sections. In fact, the proportion of fixed charges that is currently recovered through the fixed part of the tariff is less than 50%. In other words, the energy charges themselves are expected to cover more than half the fixed charges incurred in the system. In such a situation there does not appear to be any reason for providing any rebate in fixed charges to seasonal industries. On the contrary, there may, in fact, be a case for levying a surcharge on consumers who have extremely low load factors. This would be perfectly justified in a situation where energy charges are also meant to recover a substantial portion of the fixed charges in the system. However, the Commission would not like to levy such a surcharge at this stage. **The scheme of concessional tariff to Agro based seasonal industries is, therefore, not agreed to by the Commission**.

5.28 Interest Waiver Schemes

KPTCL has currently announced an interest waiver scheme. This scheme is to apply to Bhagya Jyothi consumers and IP set consumers as well as all other installations belonging to Government/Public Sector undertakings and local bodies. The concession announced is that the interest would be waived if the principal amount is paid before a certain date. KPTCL has not sought the approval of the Commission to this interest waiver scheme. At the hearings, CMD/KPTCL mentioned that since the interest amounts waived under this scheme represent income that has been booked in previous years, the waiver would not affect the revenue gap for the current year. While this is partially true, this does not represent the full picture. Some portion of the interest that has been booked in the current year would also have to be waived as a result of this scheme. Secondly, the Commission has also noted that the average revenue realization rates for various categories of consumers that has been considered for arriving at the estimated revenue for the current year obviously includes a certain amount on account of interest. To the extent that this amount is waived there could be a reduction in the estimated revenue for the current year. **While the Commission directs KPTCL not to announce any such interest waiver scheme in future without obtaining prior approval therefor from the Commission, the Commission also directs KPTCL to close the scheme already announced as the Scheme favours only defaulters at the cost of prompt payers.**

5.29 Transmission Tariff

The Commission has issued separate Transmission and Supply Licences to the KPTCL. The existing scheme of the Act requires that the KPTCL in its capacity as a Transmission Licensee, should file its ERC and Tariff proposals separately for the Transmission Licence. However, this has not been done. KPTCL has not filed any proposals for levying a Transmission tariff to provide for wheeling of power across its grid by any other party. However, the Commission notes that the KPTCL has been levying a wheeling charge. KPTCL has also recently modified the wheeling charges it has levied without seeking the approval of the Commission therefor. The entire scheme of the Act very clearly shows that this action of the KPTCL is contrary to law. The wheeling charge is nothing but a tariff and KPTCL should have obtained the approval of the Commission before either levying or modifying this tariff. The Commission notes that the modification made by KPTCL has been challenged in a set of Writ Petitions filed before the High Court of Karnataka. **Subject to the final decision of the High Court, the Commission directs KPTCL to file its proposals relating to the Transmission Tariffs with the Commission and obtain approval therefor. While doing so the KPTCL is directed to also file tariff proposals relating to banking of energy as well**.

5.30 Other Charges

1. The definition of Tariff in the explanation to Section 27 of the KER Act, 1999, says that "tariff" means a schedule of standard prices or charges for specified services which are applicable to all such specified services provided to the type of customers specified in the tariff published.

2. This definition of tariff is wide enough to cover all the various types of charges that can be levied by the KPTCL.

3. Apart from the tariffs for which KPTCL has now sought approval, the Commission notes that there are several other types of charges that are now being levied under various provisions of the Electricity Supply Regulations, 1988. For example these include the following:

1. Augmentation charges to be paid for supply at lower than specified voltages (Regulation 3.02).
2. Registration fees for registering application for power supply (Regulation 4.01).
3. Infrastructure charges (levied under administrative orders of the Board).
4. Fees prescribed for various purposes such as testing of meters, rating of installations, etc.
5. Supervision charges, testing for servicing new installations, temporary disconnection, reconnection charges etc. (as listed in Regulation 47)

4. The Commission directs KPTCL to furnish a comprehensive proposal in this regard within one month from the date of this Order. Such proposal should include all such charges that the KPTCL is either levying at present or proposes to levy in future, Pending the Commission's approval to such proposal, the KPTCL is directed not to modify any charges that are being levied or to impose any new charges.

5.31 Customer Chargers

1. KPTCL has already issued a customer charter providing various benchmarks for customer service. KPTCL has also informed the Commission that a set of internal standards for implementing the customer charter have also been issued to all their employees. This customer charter has not yet been approved by the Commission. In terms of condition 23.3 of the supply licence, the licensee is required, within one month after the licence has come into force, to prepare and submit to the Commission for approval, a consumer rights statement, explaining to the consumer their rights as consumers of the licensee in its capacity as operator of its supply business. Condition 23.1 of the same licence requires the licensee to submit to the Commission a Code of Practice concerning the payment of electricity bills by consumers and including appropriate guidance for the assistance of such consumers who may have difficulty in paying such bills. This Code of Practice is also required to be placed before the Commission within one month after the licence has become effective. Similarly a complaint handling procedure is required to be placed before the Commission for approval in terms of condition 23.2.

2. The Commission has already noted earlier in this Order that the supply licence to the KPTCL has been issued on 7.12.2000. **The Commission, therefore, directs KPTCL to submit the codes referred to above for the approval of the Commission**. As and when the codes are approved, the customer charter prepared by the KPTCL will stand superseded by them.

3. The Commission also directs KPTCL to set up toll free telephone numbers so that customers who have complaints

about the KPTCL's services can easily register the same. The Commission also directs KPTCL to formulate a scheme for compensating consumer put to loss by deficient supply and present the same to the Commission for approval within three months from the date of this Order.

5.32 Miscellaneous (Non-Tariff) Income

KPTCL has estimated the non-tariff income for 2000-01 at Rs.180 Crores. The break-up of this estimate is as follows :

Table – 42 : Details of Non-tariff Income

(Rs. Crores)

Delayed payment charges from consumers	116.19
Supervision charges	10.00
Other receipts from consumers	17.00
Interest on staff loans and advances	2.00
Interest on securities, bank deposits, etc.,	5.00
Other items	29.81
Total	**180.00**

The Commission has examined the projections made in comparison with the actuals of the past two years and generally finds the same to be in order.

5.33 General Terms and Conditions

KPTCL has proposed certain modifications in the General Terms and Conditions applicable to various categories of consumers. The Commission's decision on these proposals are indicated in **Annex 4** which includes the detailed tariffs as approved by the Commission.

5.34 Energy Audit, Service Quality, Distribution Transformer Failures

Directives of the Commission with regard to Energy Audit is given at Annex 5.
Directives of the Commission with regard to quality of service is given at Annex 6.
Directives of the Commission with regard to Distribution Transformer failures is given at Annex 7.

SUMMARY

1. The following represents the effect of the tariff revision, as approved by the Commission, in comparison with the increases sought for by the KPTCL :

Table – 43 : Details of the Approved Tariff (Rs. Crores)

SL NO	Description	Tariff increase proposed by KPTCL	Tariff increase approved by KERC
	LT Installations		
1	Bagyajyothi, Kutirjyothi	-	9.53
2	a) Domestic Lighting, Govt & hospitals lighting (b) Non-domestic, non-commercial lighting	105.27	94.05
3	Domestic combined lighting & heating and motive power-AEH	243.19	145.18
4	Commercial lighting, heating & motive power		-27.62
5	IP Sets	116.09	139.10
6	Water Supply	7.84	12.85
7	Private horticultural nurseries, coffee, tea, Coconut & arecanut plantations.	2.96	4.44
8	Indl, non-indl, heating and motive power including lighting	147.53	93.96
9	Public lighting/street light	32.85	32.85
	HT Installations		
10	Industrial	72.87	54.65
11	Commercial	15.44	15.94
12	Irrigation. LIS	3.43	3.01
13	Railway Traction	2.14	1.30
14	Water supply	46.18	15.08
15	Rural Electric Co-operative Societies (Hukkeri)	12.64	To be considered separately
16	Residential Apartments	2.74	2.74
	TOTAL	811.17	587.06

2. The Commission has earlier in the Order commented on the inadequacies of KPTCL's database. KPTCL's data regarding the consumption profile of various categories of consumers leaves much to be desired. However, the Commission has had to base its estimates only on the basis of this data, in the absence of any other alternative. The additional income from the tariff revision approved by the Commission has been estimated subject to the limitations of data. It must also be noted that the Commission has not able to estimate the impact of rebates allowed to rural consumers, additional income arising out of modifications in the tariff for IP sets and the impact of extension of the rebate for EHV consumption.

3. The following is the summary position of the projected profit and loss account of KPTCL for the year 2000-01 :

Table – 44 : Details of Revenue and Expenditure Approved

by the Commission for 2000-01

(Rs. Crores)

Sl No	Particulars	As proposed by KPTCL	As approved by KERC
1	**Revenue Receipts**		
a	Revenue at existing tariff	3603	3603
b	Non-tariff income	180	180
c	RE Subsidy from Govt	879	879
	TOTAL	4662	4662
2	**Revenue Expenditure**		
a	Power purchase	4254	3695
b	Operation and maintenance	134	134
c	Establishment expenses	856	821
d	Depreciation	299	299
e	Interest & Finance Charges	443	443
f	Other Misc (Prior period)	20	
	TOTAL	6006	5392
3	Rate of Return at 3 %	76	76
4	Total Revenue Requirement (2+3)	6082	5468
5	**Revenue Deficit before tariff revision (1-4)**	-1420	-806
6	Tariff revision impact*	137	147
7	Revenue from additional sales due to reduction in T&D loss **		135
8	**Revenue deficit after tariff revision (5+6+7)**	-1283	-524

* KPTCL has considered revision impact for 2 months in the current year, whereas the same is considered as 2 ½ month by KERC
** Revenue expected from additional sales of 586 MUs at average energy rate of Rs.2.30 per unit.

4. The above table discloses a gap of Rs. 524 Crores in the revenue requirement of KPTCL for the year 2000-01. This gap has been largely caused by the delay in KPTCL's filing of the tariff revision proposals. It can be seen that if the tariff revision proposals had been filed in such a manner as to bring the revised tariff into force for the full year, the gap would have been entirely covered.

5. It is not possible for the Commission to make up the shortfall in revenue fully at this stage. The Commission is of the opinion that as the delays have been caused by the licensee, the shortfall in resources arising there from has to be either borne by the licensee or made good by the Government. Therefore it would not be possible for the Commission to carry forward this shortfall for being recovered in the next financial year or whenever the next revision is given effect to.

6. The Commission notes that all these years the Government of Karnataka has been providing the subsidy necessary to bring up the rate of return of the erstwhile KEB to the prescribed 3 % on net fixed assets. As has been explained above, the deficit in the KPTCL's accounts for 2000-01 is largely due to the subsidies it has been implementing at the behest of the Government. KPTCL is also the successor entity of the KEB and is even today owned fully by the Government. In view of this, the Commission hopes that the Government of Karnataka would provide the necessary subsidy required for the year 2000-01 also.

7. In exercise of the powers conferred on the Commission by Sub-section (10) of Section 27 of the KER Act, 1999, the Commission hereby notifies the KPTCL that the tariff amendment proposals as placed before the Commission by the KPTCL are not accepted in full for the reasons mentioned in detail in the foregoing sections of this Order. The Commission further notifies KPTCL that the alternative amended tariff, as approved in the various sections of the Order above, be implemented.

8. This Order is signed, dated and issued by the Karnataka Electricity Regulatory Commission on this 18th December of 2000.

[PHILIPOSE MATTHAI] [H.R.GOPAL] [NALINI.M.K.MENON]

Chairman Member Member

Date : 18th December, 2000
Place : Bangalore

Commission's Directives

1. The KPTCL shall improve its management information system in the next filing to give greater details and explain the basis for all the projections indicating the sources of data and the method of estimating projected values.
2. Directives in regard to Energy Audit as per Annex 5.
3. Directives in regard to Quality of Service as per Annex 6.
4. Directives in regard to transformer failure as per Annex 7.
5. Directives in regard to capital works programme as per Section 4.6.
6. Directions in regard to metering as per Section 5.25.
7. Directions in regard to codes and toll free number as per Section 5.31.
8. Directions as per interest wavier schemes as per Section 5.28.
9. Direction in regard to other charges as per Section 5.30.
10. Direction in respect of power purchase plan as per Section 4.2.6.
11. Direction in regard to pension funds as per Section 4.3.
12. Direction in regard to Transmission Tariff as per Section 5.29.
13. Direction in regard to fuel escalation charges as per Section 4.2.7.
14. Direction in regard to disconnection of all unauthorized IP sets as per Section 4.2.2.
15. The KPTCL shall take up studies in respect of the following :
    a. Cost of service to each category of consumers
    b. Paying capacity of domestic lighting, IP sets, Bhagyajyothi consumers (subsidized categories)
    c. Manpower Study of employee strength, powers, responsibilities effectiveness of officers, possible avenues for cutting down of employee cost. The employees cost is very much above the national average.
    d. Census of IP sets to identify the number of existing IP sets, bore wells, open wells, etc., and also defunct wells. The Study shall also assess the number of unauthorized IP sets.

All the studies shall be completed in six months and made available to the Commission.

ANNEXE – 1

List of objections petitions filed with the Commission in compliance with the requirement as per public notice against the KPTCL application for revision of power tariff

Sl. No.	Objectors Name and Address	Petition No.
1	Shri M.Seetharam, Director, The Nurserymen Coop. Society Ltd., Lalbagh, Bangalore 4.	13/2000
2	Dy.Chief Electrical Engineer, South-Western Railways, Bangalore-23.	22/2000
3	Shri K.S.Manjunath, No.406, 95th Cross, Kumaraswamy Layout, Bangalore - 78.	25/2000
4	Shri D.Puttaswamy, BA LLB., Advocate, No.36, II Main, 4th Cross, Chamarajapet, Bangalore - 18.	26/2000
5	Shri K.Prabhulingappa, Owner of Shri Basaveswara Rice Industries, Kallipalya, Gubbi Taluk, Tumukur District.	52/2000
6	Shri V.M.Shrinivasagowda, Ammatur, Kunigal Taluk, Tumukur Dist.	54/2000

7	Shri B. Bhiraiah, Partner, Jaibhairaveswara Rice Mill, C.S.Pura, Gubbi Taluk, Tumukur District.	55/2000
8	Shri G.Sachidananda Nayak, S/o late K.Gopal Nayak, Retd. Bank Officer, No.60, 7th Cross, Gokulam I Stage, Mysore 570 002.	74/2000
9	Shri M.R.Doreswamy, 1693, 5th 'A' Cross, BSK I Stage, Bangalore – 50.	75/2000
10	Shri H. Shivaramu, Ankanahalli Village, Kylancha Hobli, Ramanagaram Taluk, Bangalore Rural District.	80/2000
11	Shri H.S.Naik, Suptd.Engineer, Elec.(Rtd), 52, 'VRATH', 8th Main, BEML Layout, I Stage, Basaveswaranagar, Bangalore 560 079.	82/2000
12	J. Yogesh, #2, Devrakere Extn. ISRO Layout, Bangalore – 78.	101/2000
13	Secretary BSK 1st Stage Welfare Association, #12, 21st Main Road, BSK 1st Stage, 2nd Block, Bangalore – 50.	105/2000
14	N.S. Krishna swamy Retd., Senior Sports Reporter, Deccan Herald, 12, 25th Main Moad, BSK 1st Stage, 2nd Block, Bangalore- 50.	106/2000

15	P.R. Seshabhushana Pavanaja Krupa, #348, 1st Cross, 10th Main, BSK 1st Stage, 2nd Block, Bangalore – 50.	107/2000
16	S. Suryanarayana Rao, Secretary, Bharath Communist Party (Marksvadi) Karnataka State Samithi, #12, 18th Cross, Sampangerama Nagar, Bangalore – 27.	110/2000
17	Patil Veeranna, Dy. Chief Electrical Engineer, Indian Railways, Yelahanka, Bangalore – 64.	148/2000
18	C. Rathnakar Setty, #2, Mathrushree, 6th Cross, Ganesh Block, Dinnur Main Road, R.T. Nagar, Bangalore – 32.	161/2000
19	Y.H. Shankare Gowdaru, Chairman, Vokkaligara Yuva Vedike ®, #72, 3rd Main Road, 4th Block, 4th Stage, Basaveswaranagar, Bangalore – 79.	168/2000
20	J. C. Bayaareddy, Gen Secretary, Karnataka Prantha Raitha Sangha Karnataka State Committee, #12, 18th Cross, Sampingeramanagar, Bangalore – 27.	182/2000
21	Subbarayappa, Vice President, Akhila Karnataka Bayalu seeme (IP SET) Balakedharaa Sangha, Kodigenahalli, Madhugiri Taluk, Tumkur Dist.	203/2000

22	Saravana Alloy Steels (P) Ltd., 21/D, Industrial Suburb, II Stage, Yeshwanthapur, Bangalore 22.	37/2000
23	M/s Rajashree Cement, A Unit of Grasim Inds. Ltd., 5th Floor, Industry House, 45, Race Course Road, Bangalore 560 001.	79/2000
24	Executive President of Rajashree Cement, #45, 5th Floor, Industry House, Race Course Road, Bangalore – 1.	118/2000
25	Chairman & ManagingDirector M. Sivasubramaniam Velan Textiles Limited, Ankanasettypura Post, Chamarajanagar (Tq. & Dist.) 571127.	140/2000
26	Vice President, Greater Bangalore Industries Association, #40-J, Opp. NGEF Ancillary Estate, Doddanakundi Industrial Area, ii Phase, Mahadevapura Post, Bangalore – 560 048.	154/2000
27	Proprietor, Goodrich Rubbers, #6/1, Agara Village, Sarjapaur Road, Bangalore – 560 034.	156/2000
28	Proprietor, Gem Rubbers, #6/1-A, Agara Village, Sarjapaur Road, Bangalore – 560 034.	157/2000
29	Secretary, Challakere Chambers of Commerce and Industries ®, Chamber of Commerce Building, Opp. APMC Office, Bangalore Road, Challakere – 577 522.	162/2000

30	B.T.Narayana Bhatt, President, Vitla Vidyuth Balakedaarara Vedike, Nerelekatte, Dakshina Kannada	5/2000
31	Shri K.Umesh Rai, President, B.J.P., D.K. Zilla Raitha Morcha, Mangalore	36/2000
32	Secretary, The Catholic Board of Education, Shanthi Kiran, Bajjodi, Mangalore – 575 005.	38/2000
33	Managing Director, Lamina Foundries Ltd., 17-19, Industrial Area, Baikampady, New Mangalore 575011	39/2000
34	Secretary, The Apsotolic Carmel Educational Society, St.Ann's Convent, Mangalore 575001.	64/2000
35	Dr.Suresh Kumar Kudur, Bharathiya Kissan Sangha, Mandir Road, Puttur 574 201, D.K.	50/2000
36	Mrs.Clara Pereira, Bellur Lachil House, Pajeer Post & Village, Bantwal Taluk 574 199.	95/2000
37	Shri H.S.Sairam, Proprietor, Koragappa Ice & Cold Storage, New South Wharif, Bunder, MANGALORE 575 001.	84/2000
38	Shri P.Sudakar Rao, 485, 'Pangal House', Kadri Road, MANGALORE - 575 003.	85/2000
39	Managing Director Karnataka Fisheries development Corporation Limited, Hoige Bazar, Mangalore – 1.	108/2000

40	President The Karnataka Coastal Ice Plant and Cold Storage Owners; Association, Dhiraj Complex, Near Service Bus stand, Surathkal, Mangalore.	109/2000
41	Managing Director The South Kanara And Udupi Districts Fish Marketing Federation, Ltd., Mulihithlu, Mangalore.	119/2000
42	Shri C.V.Gopalakrishna, Kelinja, Veerakambha Village, Bantval Taluk, Dakshina Kannada Dist 574 269.	76/2000
43	Shri D.Bheema Bhat, Hegdekodi, Veerakambha Village, Bantval Taluk, 574 269.	77/2000
44	U. Rama Bhat, Uggappakodi, Post Mangilpadavu, Veerakambha Village, Bhantval Taluk, Dakshina Kannada – 574 243.	104/2000
45	V. Mahalinga Bhat Uggappakodi, Post Mangilpadavu, Veerakambha Village, Bhantval Taluk, Dakshina Kannada – 574 243.	99/2000
46	Sri. M. Shivarama Bhat, Residing at Murugaje, Kedila Post & Village, Bantval Taluk, Dakshina Kannada Dist. 574 309.	139/2000
47	Sri. K. Ramachandra Bhat, Residing at Sampya, 'Srinivasa', Kuriya Post and Village, Via Aryapu, Puttur Taluk, Dakshina Kannada Dist.	141/2000

48	K. Venkataramana Bhatt, Kaje House, C/o. K. Ramakrishna Bhat, Mamchi Post, Bhatwal Taluk, D.K. 574323.	163/2000
49	President, All India Areca Grower's Association ®, Shenoy Complex, 1st Floor, Opp.Petrol Bunk, Yelmudy Puttur-574 201 (D.K.)	40/2000
50	Secretary, Karnataka Planters' Association, Spencer Road, P.B. No: 18, Chikmagalur – 577 101.	150/2000
51	B.K. Pemmaiah and 14 others Theralu Village (Post), Virajpet (Tq), Coorg Dist.	167/2000
52	Secretary Commerce Educational Institutes' Association of Karnataka, #20, J.A., 5th Cross Road, Mohamodan Block, Malleswaram, Bangalore – 3.	117/2000
53	K.S. Nandish Owner, Sri Gurukrupa Rice Mill, Sira Road, Nittor, Gubbi Taluk, Tumkur Dist.	147/2000
54	Secretary Banashankari Consumer Protection Society, #1939, 9th Main, 27th Cross, Banashankari IInd Stage, Bangalore – 560 070.	152/2000

55	K.C. Aswathanarayana Setty, #2805, 15^{th} Cross, 8^{th} B Main, Banashankari IInd Stage, Bangalore – 560 070.	153/2000
56	M.N. Ananda Theertha Rao, Residing at Manchenahalli, Taluk: Gouribidanur, Dist: Kolar.	155/2000
57	President, Citizen for Civic Aminities, Basaveswaranagar, # 71, Sharada Colony, Basaveswaranagar, Bangalore –79	158/2000
58	President, Girinagar Welfare Association, Girinagar, Bangalore – 85.	164/2000
59	Shri A Ramdas, M.L.A. S/o Sri A.N Rao, # 1063/77A, 5^{th} Cross, 1^{st} Main Road, Vidayaranpuram, Mysore – 570 008.	180/2000
60	S. Viswanath, Trustee, CIVIC, #109, 1^{st} Floor, 11^{th} Main, Vasanthnagar, Bangalore – 560 052.	192/2000

61	B.S. Venkata Varada, Proprietor, Coconut Valley Corporation, Chaluvanahalli Post, Arsikere Taluk - 573 112.	208/2000
62	Chairman, Public Affairs Centre, 578, 16th B Main Road, 3rd Cross, 3rd Block, Koramangala, Bangalore – 34.	184/2000
63	Y.G. Muralidharan, Consumers Rights, Education & Awareness Trust (CREAT), 239, 5th C Main Remco Layout, Vijayanagar, Bangalore – 40.	185/2000
64	S Govindappa, #603, 21st Main, 4th T Block, Jayanagar, Bangalore – 41.	186/2000
65	MCR Residents Welfare Trust ®, #647, 12th Cross, Magadi Chord Road, Vijayanagar, Bangalore- 40.	188/2000
66	Secretary, Social Amenities Association ®, #638, Seventh Cross, Eleventh Main, HAL Second Stage, Indiranagar, Bangalore –8.	191/2000
67	RSN Gouda, 12/105, 11th Road, Pal Channappa Extension, Bikasipura, Subramanyapura Post, Bangalore – 61.	198/2000

68	Managing Director, Karnataka State Coconut Shelter powder Manufacturers Association, #21, Ashwini, 4th Main, 1st Stage, KHB Colony, Basaveshwaranagar, Bangalore – 79.	199/2000
69	B. Narayan Swamy President, BTM Layout Welfare Assocaiation®, #3, Sri Vigneshwara Temple, 26th Main, BTM Layout 2nd Stage, Kuvempunagar, Bangalore – 76.	200/2000
70	Nanjaiah, C/o Late Chikkananjappa, K.R. Extension, Hoskote 562 114, Bangalore Rural District.	201/2000
71	Secretary, BANSSIA, #54, Bhadrappa Estate, Magadi Road, Kamakshipalya, Bangalore – 79.	202/2000
72	P. Suresh, Secretary, Jayanagar 5th Block Residents Welfare Association, 598, 11th Main, 5th Block, Jayanagar, Bangalore – 41.	209/2000
73	R. Verupakshiah, #487, 7th Cross, 4th Main, 3rd Phase, J.P. Nagar, Bangalore – 78.	214/2000

74	P.R. Suryanarayana Secretary, Karnataka Pranthya Farmers Association, Kolar Dist. Samiti, #8/2, P.T. Krishnamurthy Compoundm 1st Cross, Palasandra Layout, Kolar.	216/2000
75	Akhila Bharatiya Grahak Panchayat, #356, 1st Stage, visveswaranagar, Mysore – 570 008.	224/2000
76	President Karnataka State Cold Storage Owners Association Registered, #2, M.G. Complex, Yeshwanthapur, Bangalore – 22.	116/2000
77	Y.N. Rama Rao, President, BGE & BLRWA, Bangalore – 19.	149/2000
78	Vice Chairman, Karnataka Textile Mills Association, Bangalore, #64, Vastra Bhavan, 4th Main, Near 18th Cross, Malleswaram, Bangalore – 55.	165/2000
79	M/s. Alps Granite (P) Ltd., Attibele Industrial Area, Attibele, C/o Room No.6, No.12, Raheja Chambers, Museum Road, Bangalore – 560 001. & M/s. Doddaballapur Spinning Mills, Doddaballapur.	166/2000

80	Ranjit Sipani, Secretary, Karnataka Small Scale plastic Reprocessors & Manufacturers Association ®, #1288, 7th C Maiun RPC Layout, Vijayanagar, Bangalore – 40.	178/2000
81	Mahendra V Sakariya, Manager, Jalore Plastic ware, #472/2, NTY layout, Avalahalli, Bangalore – 26.	179/2000
82	FA&CAO, BWSSB, 1st Floor, Cauvery Bhavan, Bangalore – 9.	183/2000
83	Secretary, KASSIA, 2/106, 17th Cross, Magadi Road Chord Road, Vijayanagar, Bangalore – 560 040.	187/2000
84	ITI Ancillary Industries Association, ITI Ancillary Industrial Estate, Mahadevapura, Bangalore – 48.	189/2000
85	Secretary, St. Joseph's College Hostel, Lalbagh Road, Bangalore-27.	196/2000
86	Managing Director, Bhoruka Gases Limited, Whitefield Road, Mahadevapura Post, Bangalore – 48.	197/2000

87	K.S. Subraya, S/o Seetharama Bhatt, Subbaiah enterprises, C-6, Industrial Estate, Yelahanka, Bangalore – 64.	204/2000
88	L. GopalKrishnamurthy, #49, Industrial Subrub, Yeshwanthpur, Bangalore – 22.	205/2000
89	B. Bhagavan, S/o B. Gundu Rao, L.R. Enterprises, C-20, KSSIDC Estate, Yelahanka, Bangalore – 64.	206/2000
90	General Manager, KUDREMUKH Iron Ore Company Ltd., 2nd block, Koramangala, Bangalore – 34.	181/2000
91	Secretary, The Greater Mysore Chamber of Industries, Sheriff Chambers, #14, Cunningham Road, Bangalore - 52.	190/2000
92	M.G. Prabhakar, Chairman, Energy Committee, FKCCI, K.G. Road, P.B. No:9996, Bangalore – 9.	193/2000
93	Secretary, Peenya Industries Association, 1st Cross, 1st Stage, Peenya Industrial Estate, Bangalore-58.	194/2000

94	President, Rajya Raithara Para Horata Samithi, Mukmam Agali, Athani Tq., Belgaum	8/2000
95	Dr. Anant Huilgol, Secretary General, Citizens' Forum, Hubli (R), 2, Ashoknagar Road, Near Sawai Gandharva Hall, Hubli - 580 029.	44/2000
96	The President, The North Kanara Small Scale Industries Association, Shed No.16, Industrial Estate, Banavasi Road, SIRSI (N.K.)	56/2000
97	President, Belgaum District Lift Irrigation Federation, Bellada, Bagevadi, Hukkeri Taluk, Belgaum District.	58/2000
98	Shri R.K.Rangarej, President, Gadaga-Betageri Shahara Congress Committee, Health Camp, Betageri, Betageri-Gadag 582102.	62/2000
99	Secretary, Dandeli Education Society, Bangur Nagar, Dandeli - 581325.	63/2000
100	M/s Karnataka State Rice Millers Association (R), C/o Siddalingeshwara Traders, Opp.APMC, Gunj, Gangavathi, Koppal District,	78&213/2000
101	Chairman, Ugar-Khurd Sahakari Niravari Sangh Niyamit, Ugar-Khurd 591 316, Athani Taluk, Belgaum Dist.	81/2000

102	President, Consumers' Protection Council, Unnemath Galli, SIRSI 581 401, U.K.	83/2000
103	Puttappa Dyavappa Kallapur, Hirekanshi (Post Goudi), Hangal, Haveri Dist.	159/2000
104	Puttappa Dyavappa Kallapur, (Rice Mill) Hirekanshi (Post Goudi), Hangal, Haveri Dist.	160/2000
105	Prakash Shivabasappa Kulkarni, Secretary, Belgaum Taluk, Kabbu Belegarara Hita Saunrakshana Sangh, Belgaum.	176/2000
106	Mr. Ganganna, President, Belgaum Taluk Kabbu belegarar Hita Saunrakshana Sangh, Belgaum.	177/2000
107	President, Belgaum Chamber of Commerce and Industries, Khanapur Road, Udyambag, BELGAUM – 590 008.	195/2000
108	Managing Director, Hukeri Rural Electric Co-operative Society Ltd., Hukeri, Belgaum Dist.	207/2000
109	Prakash Shivabasappa Kulakarni, Balekundri K.H. Dist. & Tq: Belgaum, 591 103.	215/2000
110	Secretary, Uttara Kannada Dist. Agricultural Electricity users hitharakshina sanga ®, Tq: Sirsi, Banavasi – 581 318.	217/2000

ANNEXE – 2

SUMMARY OF OBJECTIONS

The ERC and Tariff filings were cleared by the Commission for publication by KPTCL on 20.9.2000. The publications appeared in four English daily news papers (Deccan Herald, Indian Express, Times of India and Hindu) and four Kannada daily news papers (Prajavani, Udayavani, Samyukta Karnataka and Vijaya Karnataka) on 29.9.2000 and 30.9.2000 inviting public objections and representations. The last date for filing the objections and representations was 14.11.2000 (i.e., on completion of 30 working days from the date of first publication of the advertisement).

The KERC (Tariff) Regulations, 2000, require that interested persons file their objections and such documents as they seek to rely upon, supported by an affidavit, in six copies, and also indicate whether they would like to be heard in person by the Commission. While this was the requirement in case an objector desired to be impleaded as a party to the proceedings, the Commission also recognized that there would be a large body of consumers who might not wish to be formally impleaded as parties to the proceedings but might, nevertheless, wish to have their point of view heard. The Commission, therefore, also issued a press notification indicating that even those objection petitions not in strict conformity to the procedures specified in the notification would be duly taken into account by the Commission.

The Commission received a total of 232 objection petitions; 110 with affidavits and 122 without affidavits. Those objectors, who filed their affidavits and also indicated that they would like to be heard in person, were called for the public hearing.

District-wise Breakup:

The category-wise and district-wise consumers, who submitted their objections to the KPTCL's proposal of tariff revision, is detailed below:

Categories:

1. Individuals
2. Consumer Associations and Co-operative Societies
3. Industries
4. Railways
5. Water supply
6. Educational Societies
7. Political parties.

District-wise breakup

Sl.No	District	No. of petitions with affidavit	No. of petitions without affidavit	Total

1.	Bangalore (Urban & Rural)	58	38	96
2.	Tumkur	05	-	05
3.	Mysore	03	05	08
4.	Hassan	01	04	05
5.	Chitradurga	01	04	05
6.	Chamarajanagar	01	-	01
7.	Kolar	02	02	04
8.	Mandya	-	01	01
9.	Dakshina Kannada	19	17	36
10.	Udupi	01	04	05
11.	Shimoga	-	07	07
12.	Chikamagalur	01	-	01
13.	Coorg	01	01	02
14.	Belgaum	08	04	12
15.	North Kanara (UK)	04	13	17
16.	Dharwad/Hubli	01	12	13
17.	Haveri	02	-	02
18.	Koppal	01	01	02
19.	Gadag	01	01	02
20.	Bijapur/Bagalkot	-	03	03
21.	Bellary	-	04	04
		110	121	231
22.	Chennai(Tamilnadu) Southern Railways	-	01	01
		110	122	232

KPTCL were asked to file rejoinders to the petitions received with copies sent to the various objectors and the Commission.

The Commission notified the dates of hearings at Bangalore, Mangalore and Dharwar on the following dates. The objectors belonging to the following Districts were called to participate in the hearings at Bangalore on 27th & 30th November and 1st & 5th December 2000.

1. Bangalore (urban)
2. Bangalore (Rural)
3. Tumkur
4. Mysore
5. Hassan
6. Chitradurga
7. Chamarajanagar
8. Kolar

9) Mandya

The objectors from the following districts were called to participate in the hearings at Mangalore on 28th and 29th November 2000.

1. Dakshina Kannada
2. Udupi
3. Shimoga
4. Chikamagalur
5. Coorg

The objectors from the following districts were called to participate in the hearings at Dharwar on 4th December 2000.

1. Belgaum
2. North Kanara (UK)
3. Dharwad/Hubli
4. Haveri
5. Koppal
6. Gadag
7. Bijapur/Bagalkot
8. Bellary

The hearings included the petitioners' comments on the response sent by KPTCL to their objections. The Commission made observations on the arguments made by both parties and asked for certain clarifications and information during the course of the hearings. The various issues raised during the hearings are summarized below:

Proposed tariff is very high:

The proposed increase in the tariff is alleged to be exorbitantly high, mainly in the AEH and industrial categories. Many have quoted a Government of Karnataka order, vide GO No.DE 130 EEB 95 dtd. June 21, 1996, which rules that the overall increase in tariff in a particular year should not be more than 13%. There have been a large number of petitions from individuals, agencies, industries and citizens' forums alike objecting to the raise in the already high tariff rates.

Velan Textiles represented by their Chairman and Managing Director has pointed out that the prohibitively high tariff rates for industry leads to an increase in captive generation. This implies large revenue losses for KPTCL. In the context of domestic and AEH categories, it has been proposed to reduce the width of the second slab for domestic category from 200 to 100 units. This is coupled with the proposed increase in tariff. Many petitioners have protested that this leads to a steep rise in the electricity tariffs for these categories. Also, the proposal to bring all domestic consumption over 200 units, instead of the earlier limit of 300 units, under the category AEH has been opposed. Shri.K.S.Manjunath from Kumaraswamy Layout, Bangalore has suggested that consumption above 300 units should be billed at AEH rates while consumption within 300 units is billed at the lower domestic rates.

Shri.K.Prabhulingappa, Basaveswara Rice Industries, Tumkur has suggested that the electricity tax being high, the minimum charge of Rs.1.90 per unit effectively becomes Rs.3.20 per unit. Thus the electricity tax should be reduced as it makes the effective tariff very high. Shri.D.Puttaswamy from Bangalore has also brought to the Commission's notice that the billing is often faulty.

The President of Bangalore Gavipuram Extension and Basappa Layout Residents Welfare Association, Bangalore has observed that the increase in tariff is caused by an increase in the expenditures incurred by the utility. The triggering component of this is the increased power purchase cost, which would be temporary depending on generation of hydro-electric power. The tariff increase, on the other hand, is permanent, which is not justifiable. The Consumers' Protection Council, Sirsi has suggested that the hike in tariff should be effected only for Income tax assesses and not for the poor.

KPTCL Response: The Government order referred to with reference to the issue that only 13% increase should be allowed has no relevance to the present tariff filing. The judgment of the Hon'ble High Court was in the context of a particular revision, which was challenged before it. It is true that before the formation of KERC an annual increase of 13% was permitted as a policy for KEB but the same cannot be relied upon by any party now as tariffs are currently governed by KER Act. The power tariff hike is inevitable to bridge the gap between the revenue and the expenditure due to the increase in the cost of power purchase and also due to the fact that tariff has not been revised for the last two-and-a-half years.

Many AEH consumers whose sanctioned load is 3KW do not use power for electric stove. Heating power is mainly used for heating of water for bathing purposes. Here also non-conventional energies like solar energy are used. Thus, an AEH consumer would be using heating power for about 1-1½ hours; lights, fans and other domestic load for 4-6 hours; with not all the loads simultaneously but using only required lights, fans, etc. Usually, AEH consumption is around 250 units per month. However, since some AEH consumers do not use heating power, it was calculated that the state average consumption of an AEH consumer would be 130 units per month per installation. In respect of LT1(b) consumer, the load being limited to 1KW, most of the loads will be in usage. Hence, less diversity is given and the average basis on load works out to around 3 units per day per KW load. In respect of AEH installations the increase is not 100% but the overall increase in revenue in the bill of a consumer varies from 36-64% depending upon the level of consumption. Even if the increase is 100%, the levy cannot be considered as bad as increase is valid and justifiable. Even with the proposed increase the rate of realization is Rs.3.54 per unit as against the average cost of supply of 3.35 per unit. Hence it is not an exorbitant cost to be paid by the AEH consumer. Considering the carrying cost of power at LT supply ie., at 230 Volts, the delivered cost works out to Rs.3.68 per unit. Further, this category of consumers hitherto were paying less than the average cost of supply and now as stated above, they are not even meeting the embedded cost of supply.

The tariff in Karnataka is comparable with those in other states. As a matter of fact, in certain categories, the tariffs in other states are much higher than that in Karnataka. Also, on the whole, the tariff increase is not too much. In certain categories, the tariff increase is as low as 7%. The overall increase in tariff too is a reasonable 29%.

Irregularities in Tariff Filing:

It has been alleged that the tariff filings have many irregularities. The Peenya Industries Assn. has pointed out that KPTCL does not yet have a permanent license for supply. Many have pointed out that the tariff revision petition has not been filed by a duly authorized person holding a power of attorney. The justification of certain numbers e.g. the power purchase costs, Repairs and maintenance costs, etc. and load curves, seasonal system load curves etc. have also not been provided. Further, no explanatory note giving the basis of the projections and the assumptions made therein has been provided. Kudremukh Iron Ore Company Limited has also pointed out that the data for FY1999-2000 is not audited which is in violation of the Tariff regulations prescribed by the Commission. Also the additional revenue from the wheeling charges, the proposed increase in the tariff for Bhagyajyoti/Kuteerjyoti installations and the projected 2% decrease in T&D losses has not been accounted for in the various tariff calculations. Further, MUSS consumption has been clubbed with the T&D losses. No rationale for the assumption that Bhagyajyoti/Kuteerjyoti consumption is 18 units per month has been provided. A comparison of percentage of cost of service expected to be recovered in the ensuing financial year by the current and proposed tariffs for each consumer category has also not been provided. A proposed power purchase policy should also be drafted and submitted before the Commission as a part of the filing. The tariff filing also lacks an explanation for undertaking the capital expenditure which should have been provided in the form of cost benefit analysis since these large capital expenses should have resulted in lower T&D losses.

KPTCL Response: As a clarification it was submitted that KPTCL is not a licensee under the Indian Electricity Act, 1910 but under the KER Act. Hence, section 57 and 57A is not applicable but section 59. KPTCL is now under the Companies Act. The permanent license has not been granted to KPTCL as yet. The Board of Directors has given the required power of attorney though it has not been attached in the filing.

Providing the load curves as a part of the filing was not mandatory and thus was not done. It should however be noted that these could be given when availability is close to demand. The user does not inform the utility regarding his load. Thus the load curves are merely approximations. Also, the load has to be managed keeping the system constraints in mind. Unauthorized load is another stumbling block toward this end. Demand Side Management cannot be applied in the case of the electricity sector except in the case of IP sets. To this end, demand has to be studied and the installations it is coming from have to be identified. Many programs have been initiated to put the systems in place and get more accurate estimates of the demand, losses etc.

Quality of Service:

The industrial consumers have protested against the tariff revision saying that the tariff rates are unjustified keeping in mind the poor quality of the service. A clear indication of the poor quality of service is the trend among industries to set up captive generation plants. Rural consumers have also protested against the revision in tariff on the grounds that the quality of service is very poor. Industries require uninterrupted supply of electricity and a stable voltage. By internationally accepted norms, voltage fluctuations in the range of ±3% are acceptable. However, as has been stated by many individuals, agencies and industrial consumers, these norms are not adhered to more often than otherwise. Unscheduled load shedding and power cuts for 6-8 hours a day are a regular feature in rural areas in contrast with round the clock service provided in the urban areas. Consumer redress is also very slow in these areas. Thus it is felt that the rates for rural and urban areas should be different. Bangalore Gavipuram Extn. And Basappa Layout Residents Welfare Assn., Bangalore has suggested that power supply should be brought under essential services and strikes, disobedience, etc. should require mandatory dismissal.

The Deputy Chief Engineer, South-Western Railways in his petition has appealed that the railways should not be penalized for faults on the part of KPTCL. The case in point is that the EHT supply to the electric traction needs to be uninterrupted in nature. Thus in the event of failure of supply from one traction substation (TSS), the supply is extended from the other TSS, which leads to a cumulative maximum demand in excess of the normal maximum demand. In such a case, the railways are charged the excess at penalty rates, which has subsequently been reduced to the normal rate. The Railways contend that since the feed extension from one TSS to the other is resorted to only in case of failure due to a fault on account of KPTCL, there should be no charge levied for the demand exceeding maximum demand. The Wheel and Axle Plant, Indian Railways, situated in Yelahanka, Bangalore has also stated that the plant is a continuous process industry and any unscheduled shutdown of power leads to large losses. In view of this, KPTCL should ensure that these plants get uninterrupted power supply at proper voltage levels.

KPTCL Response: There is no comparison between the supply made to urban and rural areas. The urban areas have a different class of consumers, which include vital installations such as aerodromes, railway stations etc. Further, in the rural areas, the load is predominantly of IP sets, which are not metered and the only way to control their consumption is by restricting the hours of supply. Therefore, to maintain a balance between urban and rural supply, rural areas are being supplied 14 hours of 3 phase supply and 4 hours of 1 phase supply. At any rate the rural consumers are paying electricity charges for what they consume. Moreover the cost of delivery of power to rural areas is more compared to that of urban areas due to higher investments of HT and LT infrastructure to cater to small loads in dispersed areas. Hence the contention that tariff for rural areas should be lesser than urban areas is not justified.

Due to the gap between available supply and the demand, it is difficult to maintain frequency and voltage levels within the limits. Through proper power planning and encouraging private participation in the power generation the gap can be reduced in the near future, thereby quality power assured . KPTCL do not unnecessarily interrupt power supply unless it is warranted either for regular maintenance work or unscheduled load shedding to protect the grid supply.

Security Deposit:

There has been a fair bit of protest on the issue of collecting security deposits. While some people feel that they should be disallowed altogether, others feel that KPTCL should pay the prevailing bank or government rates of interest on them. It was also pointed out during the hearings that these deposists are being used to finance capital works projects. This should not be allowed and these projects should be financed by taking loans. It was also suggested that non-payment of bills by the consumer for a month should be adjusted against this security deposit and should not be used as a cause for disconnection. On the whole, the petitioners felt that the security charge of 3 Monthly Minimum Deposit (MMD) on the basis of average monthly demand subject to a minimum of Rs.25,000/- is exorbitant and should be brought down to 1 MMD on the basis of average monthly demand.

KPTCL Response:, It was pointed out that the security deposits are not used towards the repayment of loans and not to finance capital works. 3 MMD is collected as security deposit towards power supply consumption charges and not towards losses. The right of collection of 3 MMD in cash at any rate is beyond doubt now in view of the decision of the Hon'ble Supreme court in the Ferro-Alloys case. As regards the interest on security deposits it is to be stated that the issue is no longer open for debate. The Hon'ble Supreme Court has ruled that the 3 MMD is only payment of advance consumption charges and hence no interest is payable on the same. In case of the objectors writ appeal #6438/99 (GM KEB), the Hon'ble High Court of Karnataka has upheld the deletion of provision of ESR, which provided payment of interest. Thus objector cannot seek for payment of interest on 3 MMD.

T & D Losses:

Many objectors have contended that the T&D losses are very high at 36% in comparison with the international standards of 8%. The national average T&D losses for the year 1999-2000 was 22%, which is again much lower than that in Karnataka. Immediate measures must be taken to bring down the T&D losses and the utility must not be allowed to pass on these losses, caused to a large extent due to their inefficiency, to the consumer. Thus, it is the contention of many of the consumers that KPTCL should not be allowed to revise their tariffs till they bring their losses to acceptable limits. The Council of Citizen's amenities has quoted a statement given in the Times of India by the Deputy Chairman of the State Planning Board, Shri.Jairam Ramesh stating that the T&D Losses of KPTCL may be as high as 50%. Many consumers have thus represented that there should be a focus on reducing T&D losses and expenditure to this end would be beneficial in the long run.

KPTCL Response: The estimated T&D loss of 38.5% comprises technical losses on account of the lengthy networks which amounts to 31.2% and commercial losses of approximately 7%. The high T&D loss is due to the fact that load centers are away from the generating stations and power is being carried through lengthy lines at different voltage levels. It is impossible to reduce T&D losses to 0% as they are inherent in the system. The corporation is striving hard to reduce the loss by strengthening the system in spite of fund constraints. An investment of approximately Rs.1 Cr. is required to reduce energy losses by 0.33 MU. KPTCL proposes to invest Rs.6000 Cr. over the next 5 years in capital works for improving the system network and is expected to bring down losses substantially. KPTCL does not stand to gain by incurring huge losses but to a certain extent things are beyond its control. An investment of Rs.911 Cr. has been planned for the current year to strengthen and improve the T&D network. It would not be possible to reduce the T&D losses by 5% this year since 3 months had passed by the time the directive was issued. Thus, KPTCL would endeavour to bring down the T&D losses by 2% this year to the level of 36.5%.

IP Set Consumption:

A fair number of petitions have raised the issue of IP set consumption. Since IP sets account for unmetered consumption, the projected sales to this category is only an estimate, the basis of which has been questioned by many. The agriculturists have so far enjoyed subsidized tariffs. A large number of urban consumers have protested against this practice. Many consumers have observed that there is a considerable number of agriculturists, who are affluent and can afford the normal tariff rates. These agriculturists, they suggest, should be metered and charged for their electricity consumption. Banashankari Consumer Protection Society, Bangalore has stated that the policy of social responsibility in the event of KPTCL incurring huge losses is faulty. It is the onus of the government and not the utility to provide subsidies.

KPTCL Response: IP set consumption estimates have been a subject of debate in most of the objections. KPTCL has made efforts in the past to make realistic estimates of the same. In each taluk or subdivision across the state, transformer centers predominantly feeding IP sets were selected and metering provided at the Transformer Centers. A total of 1700 feeders have been metered covering 17000 IP sets. The readings on these were used to record the consumption of the IP sets and thus the average consumption of IP sets was derived. It must be clarified here that these readings were used for the purpose of energy auditing and not for billing. All IP sets Commissioned on and after 1 January 1997 are metered. This is definitely a step in the positive direction. Unless all IP sets are metered, measurement of energy consumed can only be done on a sample basis. Thus a detailed study may be warranted in the near future to enable accurate estimation of the consumption in this sector.

Regularising unauthorized connections*:*

Some objectors have contended that the regularization of unauthorized meters is an extremely unhealthy habit. The utility thus sends out signals to the consumers encouraging theft of power and pilferage. On the other hand, Shri.H.S.Naik has complained that he has not been given a connection in spite of having completed the required formalities within the prescribed time frame. All new connections should be metered and no regularization of unauthorized connection should be carried out. All such connections should be disconnected immediately.

KPTCL Response: On the identification of unauthorized installations, KPTCL has taken necessary actions as per law and time until 30 November 2000 has been allowed for regularization. Thereafter, such installations would be dealt as per law. KPTCL has no scheme to regularize the unauthorized connection without collecting any fee. All unauthorized IP sets being regularized are metered. IP sets above 10 HP are already metered. New IP sets serviced on or after 1 January 1997 are also being metered. An action plan has been drawn to fix meters on IP sets wherever they are not fixed. This will take atleast 2-3 years. Till date 52728 IP sets have been regularized out of a total of 86007 applications received.

Horticulture:

The Nurserymen Co-operative Society Ltd. represented by their Director, Shri .

M.Seetharam has pointed out a court order stating "Agriculture and horticulture go together and therefore, what is given to agriculturists should be made applicable to horticulturists." The petitioner has also appealed that there should be no disparity between the tariff for a privately owned and a state-owned nursery. Presently, private nurseries are charged a higher tariff under LT4©, while state-owned nurseries are classified under LT4(a), which gives them an advantage over the private nurseries.

KPTCL Response: The Horticulturists and agriculturists both use IP sets, but their end products are not the same. So horticultural nurseries cannot compare themselves with general agriculturists. Profit is the main motive for horticulture and they use electricity for commercial purpose. It is relevant to mention that the High Court of Karnataka in writ petition j#12742/91 decided on `11 October 1996 ruled that agriculture nurseries are purely commercial ventures with an objective of exploiting advanced techniques in the field of horticulture and making profit by running on commercial scales. Hence they cannot be compared to agriculturists using electricity for simply irrigating fields.

Concessional Rates for Arecanut and Coconut:

Arecanut and Coconut plantations have appealed for lower rates on the grounds that they are not to be classified as commercial crops. Thus they have appealed for the agricultural rates instead of being placed in the category LT4(c).

KPTCL Response: Classification of consumers is within the right of the Corporation. Arecanut growing is now more a commercial occupation and cannot be compared with sugarcane and coconut. Merely because arecanut is not treated as commercial in the Land Ceiling act or in other enactments, the Corporation is not bound to follow the same. For the purpose of price fixation, a different classification may be adopted. Arecanut being a crop akin to coffee and tea, it is being classified along with them. The tariff cannot be fixed taking into account the income derived from arecanut gardens. Also, the respondents cannot question the classification as it was prevailing since 1 July 1997 and till now they have not questioned the same and were paying on the said basis.

Efficiency Improvement Measures:

Steps should be taken immediately to improve the working efficiency of the utility. Employee costs should be brought down and operating efficiency should be improved. Shri. H. Sivaramu has highlighted the need for completing construction projects with speed within the predetermined time frame and budgets. He suggests that the use of competitive bidding for the pricing and contracting of these projects may achieve this end. The losses, technical and non-technical should be minimized. Power theft and pilferage should be brought down and 100% metering should be ensured. Steps to ensure conservation must also be taken up. Bangalore Gavipuram Extn. And Basappa Layout Residents Welfare Association, Bangalore has suggested that power supply should be brought under essential services and strikes, disobedience etc., should require mandatory dismissal.]

KPTCL Response: The customer charter and maintenance standards have already been introduced. Vigilance activities stepped up and consumer involvement sought to contain commercial losses. Further, all HT installations have been brought under computerized billing. The same for LT consumers, belonging to lighting and AEH is taken up as a first step, which would be extended to the whole state in the near future. Centralized round the clock complaint divisions to attend to consumer complaints have been introduced with computerized interactive voice mail system. To solve complaints of metering, billing, etc., Sowjanya counters have been opened in various places in Bangalore. In the first phase, BJ installations having more than 1 point will be provided meters during the current year and the remaining installations in phases would be completed by the end of 31 March 2004. All new BJ installations will be serviced with meter only.

KPTCL has taken several measures to improve efficiency in administration and economy. As a result of these measures it is expected that an additional revenue of Rs.122 Cr. would be mobilized which is incorporated in the tariff proposal.

In case of Government Departments or bodies, the KPTCL has not gone in for disconnection in view of the problems it can create for the government and the public. Even in these cases, KPTCL has taken steps to realize its arrears.

Theft of Power:

The theft of power is on the rise in Karnataka with the level of unmetered consumption increasing rapidly. It is imperative that the utility should take measures to bring down the theft of power and pilferage and ensure 100% metering and billing. An associated issue is that of the Bhagyajyoti and Kuteerjyoti installations. It has been observed by many that there is rampant misuse of these installations due to the highly subsidized rates and due to no metering. The subsidy burden should not be passed on to the consumers and should be borne by the Government.

KPTCL Response: KPTCL employees, wherever they were found to have connived with consumers in power theft, are facing serious disciplinary actions. KPTCL is not shielding its corrupt and dishonest employees. As far as the unauthorized load in concerned, KPTCL is simultaneously pursuing checking of unauthorized load, detecting theft through its vigilance wing headed by the Deputy Inspector General of Police. Field Officers have also been checking for pilferage by regularly inspecting consumer premises. KPTCL had introduced energy auditing whereby theft prone areas are identified. Stringent vigilance is enforced to reduce theft of energy. In the year 99-2000, 422 numbers of cognizable cases were booked and amount of Rs.3.97 Cr. has been raised as back billing charges.

Free Power to KPTCL employees:

The employees of KPTCL are given free power connections apart from their salaries. Thus the effective wage of KPTCL employees is much higher in comparison with their contemporaries in other departments. This leads to very high employee costs and also a burden on the utility's finances. This provision should be stopped with immediate effect and all the employees should be metered and billed in accordance with the tariff schedule for the state.

KPTCL Response: As per the industrial arbitration award, KPTCL has to extend free supply of electricity to an extent of 200 units per month per installation and there is no alternative to this. As the award is binding under the section 10(a) Industrial Disputes Act, KPTCL's liability on account of extending free electricity to its employees is only Rs.4.72 Cr. for the supply of 38.46 MUs for the FY1999-2000 under LT1(b) and LT2(a). This is very meagre compared to the revenue of KPTCL. It is noted that this award does not apply to recruitments after 1st January 1997.

Employee Cost:

The employee cost of KPTCL is very high due to overstaffing. Shri.R.K.Rangarej has alleged that the salaries have gone up by 200-300% in the recent past and that the non-technical staff gets paid on par with the technical staff. This is clearly a callous waste of scarce resources. It has been suggested that all the vacant posts should be frozen and a cost benefit analysis should be undertaken to reorganize the set up and make it more efficient.

***KPTCL Response*:** The sanctioned strength of the staff is 57106 and working strength is only 38410. Thus there is no excess staff. The GoK has also banned recruitment for the last several years whereas new installations are being energized every day with increasing demand for electricity. It must also be noted that the actual expenditure incurred on establishment is only 17% of the total income. It may be relevant to mention that KPTCL is facing difficulties in ensuring quality service in view of shortage of staff. The salary structure to employees is as per the settlement entered into between erstwhile KEB and the employees union. The increase in DA is on par with central government employees and as such the salary to KPTCL employees is not exorbitant as alleged.

Seasonal Consumption:

Consumers having a seasonal consumption pattern have requested for rebates during the off season. The President of the Rajya Raithara Para Horata Samithi, Belgaum has appealed that due to the seasonal nature of the consumption by rain-fed pumps, the fixed charge should be waived in the off-season. Presently these pumps are categorized under LT4(c), which includes all private horticulture nurseries, coffee, tea and arecanut plantations. A similar request has been filed by M/s.Karnataka State Rice Millers Assn., Koppal and also by many individuals who stated that rice milling being a seasonal agro-based activity producing an item of essential daily consumption along with by-products like bran should be given concessional rates. Also various cold storage plants preserving fish have appealed for concessional rates on par with seasonal agro-based industries on grounds that they are seasonal consumers.

KPTCL Response**:** The quantum of fish availability in the market may vary from month to month but there is availability through out the year. The ice plants run for the whole year though the consumption may vary. Being industries they can always include the power cost into their pricing and may pass on the same to their consumers. What is important while fixing tariff is the cost of making the power available and not the raw material availability. KPTCL is willing to supply power as it has permanent infrastructure for the same and expects returns on the same all the time. Every unit will have its peculiar feature, but on that count the supplier cannot go on framing different classes.

Promotion of Solar and other non-conventional energy:

Solar heating devices should be encouraged. Thus the rebate on such devices should be raised from 5p per unit to 15p per unit.

KPTCL Response**:** Enhancement of rebate for use of solar power cannot be considered as any use of solar energy accrues to the benefit of the consumer and there is no cost benefit to KPTCL.

Single point connections to quarters:

The Deputy Chief Engineer, South Western Railways has pointed out in his representation that often, a number of staff quarters are connected to a single point connection. Thus the railways has to pay for a large part of the consumption at the rates for the highest slab, even though the average per quarter consumption is much lower than the ceiling of the lower slabs. The railway has been collecting the bills from each quarters according to the individual consumption at the normal rates and subsidizes the gap from its own resources. This has been objected to in the audit. The request in this context is that the unit charges be levied on Railway domestic feeders on the basis of the average consumption per quarter at the particular station as is being done by the Andhra Pradesh State Electricity Board. Otherwise, the distribution of supply to the quarters may be taken over directly the utility and the staff be supplied with individual bill and the staff can be asked to pay their bill directly to KPTCL. This will involve extra staff to be provided by KPTCL at various places as the meter reading, bill preparation, sending the bill to each quarter and collection of the dues is currently done by the Railways themselves. However, instead of getting any concessions or bonus, the Railways are paying rates higher than other consumers, which is contradictory.

KPTCL Response**:** The problems of single metering to the Railway staff quarters has no relevance to revision of tariff and hence should not be considered.

Grid Support Charges:

KPTCL has proposed to introduce Grid Support Charges at 20% of the maximum demand according to the capacity of the Captive Power Plant. The Executive President of Rajashree Cement, Bangalore has represented that these should not be allowed since it is unjustified. Greater Bangalore Industries Assn. has also stated the same in their petition adding that such charges are not justified in the face of the poor quality of supply. Similar sentiments have been echoed by Kudremukh Iron Ore Company Limited, Secretary of the Greater Mysore Chamber of Industries and Bhoruka Gases Ltd., It was mentioned by Bhoruka Industries and by the Greater Bangalore Industries Assn. during the public hearings that these captive power plants have been set up at KEB's request. KIOCL has also mentioned that the poor grid condition affects the CPP adversely and the CPP in turn affects the grid positively. Bhoruka Gases Limited have also brought to light that the CPPs are already charged 75% of the contracted demand to KPTCL as minimum charges irrespective of the usage. It is suggested that KPTCL should give a rebate of 25p per unit generated from the CPP as incentive.

***KPTCL Response*:** Some HT consumers are partially using KPTCL power and partially relying on their captive power for their total load. In other cases where captive capacity is more than total requirement, they continue to be KPTCL consumers by connecting the load on to the grid. In doing so they will have the "grid support" to take care of momentary fluctuations in the grid which is caused due to starting of the CPP or highly inductive load or failure of CPP etc. This drawal of huge demand is not recorded in the 'Metered Demand' meter as the Metered Demand is calculated as the average demand over a period of 30 minutes. Also KPTCL is required to maintain the grid with the transmission system which takes care of such high fluctuations by virtue of its infinite stability when compared to individual capacity of CPP with finite stability. For these advantages and services, the consumer is required to pay Grid Support Charges.

Fixed Charges: A large number of customers have protested against the levy of fixed charges and the hike therein. It has been argued that in view of charging fixed charges, the KPTCL should provide a certain number of units of electricity to the consumer as free as in the case of telephones.

***KPTCL Stand*:** The 2 part tariff, which is an internationally accepted method of charging the electricity supply, consists of fixed charges and variable (running/energy) charges. The fixed charges depend on the contracted load while the variable charge depends upon the number of units (energy) consumed by the consumer. It is to be noted that whether the consumer switches on his load or not, the infrastructure is always to be in place since electricity is not a commodity to be supplied after taking an order from the customer in the general sense. One has to pay the charges to keep the availability of electricity at all times. Huge investments are required to set up the network including generating station, T&D system. For this huge investment, the consumer is required to pay fixed charges. The fixed charge is levied mainly to cover fixed expenses as follows: O&M, A&G, depreciation, interest and finance charges. As per the tariff filing, about 36% of the fixed cost only is recovered through fixed charges. The energy charges cover the following expense: cost of power purchase, which includes cost of fuel like coal, oil, gas etc.

Concessional rates for Educational Institutions:

Many Educational Institutions have represented against the increase in tariff for them. There has also been a considerable amount of protest regarding the merger of the LT2 (b) category with the LT3 category. This essentially implies that the educational institutes are being classified as commercial organizations. The Catholic Board of Education, a non-profit charitable institution running schools, colleges and other educational institutions in Karnataka have appealed against this merger on the grounds that they are not doing any commercial activities. They contend that since these institutions charge their students fee as decided by the government and pay their staff the government scales, they should not be clubbed with the private educational institutions. The petition by Dandeli Education Society also opposes the proposal for the recovery of interest and disconnection against educational institutions and suggests that full subsidy or free supply granted to them.

The Commerce Educational Institutes Association has also appealed that with a fall in clientele due to the emergence of computers, they should not be treated as commercial setups but as educational institutions and should be granted the rebate given to schools.

***KPTCL Response*:** In order to rationalize the tariff structure in the proposal, LT2(b) has been merged with LT3 to minimize the number of tariff categories. In matters of price fixation, only a broad classification can be made. In the writ petition bearing #4590/91 disposed on 21 February 1991 the Hon'ble High Court of Karnataka has upheld the classification of private institutions under LT3 category. For a similar classification under LT3 of the 1990 tariff, the Hon,ble High court vide order dtd.6 September 1996, writ petition #10498-10500/92, 10189/92, 20947/92, 20987/92, 26642-26646/91, 5582-5584/92 had upheld the classification of private educational institutions under LT3 after considering the very same points argued now. It is also submitted that the classification can be different for different purposes. KPTCL does not agree to continue separate classification for this category of consumers for the reasons that these institutions are collecting fees and are run on commercial lines. While both government and private institutions discharge the same functions, they do not charge the same fee and thus are classified separately.

Fuel Escalation Cost:

There has been much protest amongst the consumers against the levying of fuel escalation costs. The Greater Bangalore Industries Association, in their petition, have mentioned that the FEC should be finalized for the year and no undecided variable component should be left in the tariff. Any ambiguity in the tariff leads to considerable difficulties in pricing and planning for the industries.

***KPTCL Response*:** In the power supply bill towards energy purchased from Thermal Power Plants (RTPS, RSTPS) additional variable element called Fuel Adjustment Charge is charged apart from energy charges. Depending upon the cost of fuel, this variable charge differs from month to month. Accordingly, KPTCL has to pay charges to KPC and NTPC and collect this variable charges in the form of FEC from the consumers to whom the energy is sold. FEC cannot be finalized once for all and remains as a separate item and forms part and parcel of tariff. FEC is just a pass through and it was collected only from the HT consumers when the FEC was very less. But due to substantial increase of FEC in the subsequent period it has been passed on to the LT consumers also. Otherwise, the burden of HT consumers would be too much as these consumers are already paying more and cross subsidizing the LT consumers.

Social Obligations:

Many consumers, predominantly the urban and HT consumers, have protested against the policy of KPTCL to cross-subsidize certain categories at their cost. It has been stated by many that KPTCL being a corporatized entity should run on a profit motive and purely on financially viable line. With the corporatization of KPTCL, it is no longer an agency of the government to implement the social reforms policy. Thus, they should not take up the burden of social responsibility. IN case the government wants to subsidize a certain category of installations, KPTCL should recover from the government the revenue implications of the same. Thus the tariff should be fixed purely on the basis of cost of supply.

***KPTCL Response*:** It may be pointed out that KPTCL is fully government owned entity. Under the provisions of the KER Act, KPTCL has the discretion to differentiate among consumers on the basis of geographical location, paying capacity, etc. in order to set a just and reasonable tariff. There is vast scope for improvement in the quality of service in the rural areas. Hamlets need to be electrified, especially in the interior regions. Under the socio-economic policies of the government, KPTCL has to supply power to BJ/KJ and IP set installations at a cost below the average cost of supply. The responsibility of cross-subsidizing the socially weaker sections of the society has to be shared to some extent by the paying categories of consumers and the balance by way of subsidy from the government.

ANNEXE - 3
DETAILS OF POWER PURCHASE FOR 2000 - 01

		KPTCL PROJECTION			KPTCL PROJECTION			AS FURNISHED BY KPTCL			KERC PROJECTION			KERC PROJECTION		
SL.NO.	SOURCE	FOR 2000-01 (ORIGINAL)			FOR 2000-01 (REVISED)			ACTUALS FROM 4/00 TO 8/00			FROM 9/00 TO 3/01			TOTAL FOR 2000-01		
		Units MU	Rate PS/KWH	Amount RS.CRS	Units MU	Rate PS/KWH	Amount RS.CRS	Units MU	Rate PS/KWH	Amount RS.CRS	Units MU	Rate PS/KWH	Amount RS.CRS	Units MU	Rate PS/KWH	Amount RS.CRS
	A. Purchase from KPC Ltd.,															
1	A-i Hydel															
2	Sharavathi	4648	12.60	58.56	46.60	12.60	58.72	17.73	12.60	22.34	30.10	12.60	37.93	47.83	12.60	60.27
3	Bhadra	59	12.60	0.74	57	12.60	0.72	22	12.60	0.28	67	12.60	0.84	89	12.60	1.12
4	Liganamakki	248	21.18	5.25	250	21.18	5.30	59	21.18	1.25	191	21.18	4.05	250	21.18	5.30
5	Chakra	500	40.72	20.36	489	40.72	19.91		40.72	0.00	500	40.72	20.36	500	40.72	20.36
6	Kalinadi (Nagihari)	2277	35.60	81.06	2277	35.60	81.06	1048	35.60	37.31	1522	35.60	54.18	2570	35.60	91.49
7	Supa	373	35.60	13.28	378	35.60	13.46	154	35.60	5.48	227	35.60	8.08	381	35.60	13.56
8	Varahi	990	56.00	55.44	991	56.00	55.50	477	56.00	26.71	617	56.00	34.55	1094	56.00	61.26
9	Kappadagudda W.F.	5	273.00	1.37	6	300.98	1.81	3	300.98	0.90	2	300.98	0.60	5	300.98	1.50
10	G.D.P.H.	115	68.19	7.84	88	68.19	6.00	10	68.19	0.68	105	68.19	7.16	115	68.19	7.84
11	Kalmala P.H.	0	120.00	0.00	0	120.00	0.00	0	120.00	0.00	0	120.00	0.00	0	120.00	0.00
12	Sinwar	0	120.00	0.00	0	120.00	0.00	0	120.00	0.00	0	120.00	0.00	0	120.00	0.00
13	Mallapur & Others	26	52.00	1.35	25	116.00	2.90	3	116.00	0.35	23	116.00	2.67	26	116.00	3.02
14	Mani Dam				19	52.00	0.99	5	52.00	0.26	20	52.00	1.04	25	52.00	1.30
15	Bhadra RBC	30	171.85	5.16	34	171.85	5.84	0	171.85	0.00	0	171.85	0.00	0	171.85	0.00
16	Kadra Dam	396	150.61	59.64	331	150.61	49.85	197	150.61	29.67	172	150.61	25.90	369	150.61	55.58
17	Kadaslli Dam	446	122.67	54.71	270	122.67	33.12	132	122.67	16.19	185	122.67	22.69	317	122.67	38.89
18	Gerusoppa	129	180.03	23.22	119	180.00	21.42		180.00	0.00	119	180.00	21.42	119	180.00	21.42
	Total (A-i)	10242	37.88	387.99	9994	35.68	356.59	3883	36.42	141.43	6760	35.72	241.48	10643	35.98	382.91
	A-ii Thermal															
19	R.T.P.S.-I & II	2736	148.26	405.64	2682	147.17	394.71	1085	147.17	159.68	1597	147.17	235.03	2682	147.17	394.71
20	R.T.P.S.- III	1395	170.28	237.54	1386	168.51	233.55	616	168.51	103.80	770	168.51	129.75	1386	168.51	233.55
21	R.T.P.S. - IV	1418	270.40	383.43	1503	268.76	403.95	655	268376	176.04	848	268.76	227.91	1503	268.76	403.95
22	R.T.P.S - V	1373	251.31	345.05	1397	264.48	369.48	540	264.48	142.82	857	264.48	226.66	1397	264.48	369.48
23	R.T.P.S - VI	1313	251.32	329.98	1238	209.00	258.74	491	209.00	102.62	747	209.00	156.12	1238	209.00	258.74
	TOTAL(A-II)	**8235**	**206.63**	**1701.64**	**8206**	**202.34**	**1660.43**	**3387**	**202.23**	**684.96**	**4819**	**202.42**	**975.47**	**8206**	**202.34**	**1660.43**
	TOTAL FROM KPCL	**18477**	**113.09**	**2089.63**	**18200**	**110.83**	**2017.02**	**7270**	**113.67**	**826.38**	**11579**	**105.10**	**1216.95**	**18849**	**108.41**	**2043.34**
	B CENTRAL PROJECTS															
24	N.T.P.C	2990	135.00	403.65	3151	135.00	425.39	1228	135.00	165.78	1923	135.00	259.61	3151	135.00	425.39
25	N.L.C.(Naveli-i)	808	123.00	99.38	841	123.00	103.44	357	123.00	43.91	484	123.00	59.53	841	123.00	103.44
26	N.L.C.(Naveli-ii)	1133	173.00	196.01	911	173.00	157.60	389	173.00	67.30	522	173.00	90.31	911	173.00	157.60

27	N.L.C.ii	114	216.00	24.62	0	216.00	0.00		216.00	0.00		216.00	0.00	0		0.00
28	M.A.P.S.(Kalpakam)	230	193.00	44.39	377	193.00	72.76	146	193.00	28.18	231	193.00	44.58	377	193.00	72.76
29	PGCIL(Tr.charges)			60.00			72.00			30.00			42.00	0		72.00
30	Wheeling charges			0.00			4.00			0.00			4.00	0		4.00
31	Kaiga	162	300	48.60	332	300.00	99.60	92	300.00	27.60	240	300.00	72.00	332	300.00	99.60
	TOTAL B	5437	161.24	876.66	5612	166.57	934.79	2212	164.00	362.77	3400	168.24	572.03	5612	166.57	934.79
	C. NEIGHBOURING STATES															
32	M.S.E.B.	730	260.00	189.80	466	260.00	121.16	102	260.00	26.52	0	260.00	0.00	102	260.00	26.52
33	A.P.S.E.B.			0.00	3		0.00			0.00	3		0.00	3	0.00	0.00
34	T.N.E.B.			0.00			0.00			0.00			0.00	0		0.00
35	Western Region K.B.			0.00	23	230.00	5.29	23	230.00	5.29	0	230.00	0.00	23	230.00	5.29
36	Eastern Region K.B.	648	230.00	149.04	549	230.00	126.27	234	230.00	53.82	120	230.00	27.60	354	230.00	81.42
37	**D.V.C.**	450	200.00	90.00	0		0.00			0.00			0.00	0		0.00
	TOTAL C	1828	234.60	428.84	1041	242.77	252.72	359	238.52	85.63	123	224.39	27.60	482	234.92	113.23
	D. IPPs															
38	Thanner Bhavi	410	445.00	182.45	0		0.00			0.00			0.00	0		0.00
39	Royal Seema	137	340.00	46.58	90	466.00	41.94	0	466.00	0.00	0	466.00	9.66	0		9.66
40	TATA	267	335.00	89.45	0		0.00			0.00			0.00	0		0.00
41	Jindal	657	252.00	165.56	657	260.00	170.82	419	2960.00	108.94	238	260.00	61.88	657	260.00	170.82
42	Jindal				266	220.00	58.52				266	220.00	58.52	266	220.00	58.52
	TOTAL D	1471	329.05	484.04	1013	267.80	271.29	419	260.00	108.94	238	546.47	130.06	923	258.94	239.00
	E.CO-GENERATION															
43	Ugar Sugar Mills	42	301.00	12.64	74	301.00	22.27	42	301.00	12.64	32	301.00	9.63	74	301.00	22.27
44	Shamnur Sugar Mills	40	301.00	12.04	75	301.00	22.58	48	301.00	14.485	27	301.00	8.13	75	301.00	22.58
45	Harangi	22	301.00	6.62	0	301.00	0.00		301.00	0.00		301.00	0.00	0		0.00
46	Hemavathi	40	301.00	12.04	0	301.00	0.00		301.00	0.00		301.00	0.00	0		0.00
47	ICL Sugars	10	301.00	3.01	9	301.00	2.71	9	301.00	2.71		301.00	0.00	9	301.00	2.71
48	Prabhu Lingeshwar Sugar	0	301.00	0.00	0	301.00	0		301.00	0.00		301.00	0.00	0		0.00
49	Renuka Sugars	8	301.00	2.41	20	301.00	6.02	11	301.00	3.31	9	301.00	2.71	20	301.00	6.02
50	Raitha Sahakari	0	301.00	0.00	0	301.00	0.00		301.00	0.00		301.00	0.00	0		0.00
51	ITPL	0	301.00	0.00	1	301.00	0.30	1	301.00	0.30		301.00	0.00	1	301.00	0.30
52	SMIORE	0	301.00	0.00	9	301.00	2.71	9	301.00	2.71		301.00	0.00	9	301.00	2.71
53	Bhoruka	18	301.00	5.42	3	301.00	0.90	2	301.00	0.60	1	301.00	0.30	3	301.00	0.90
54	Murudeshwara	40	301.00	12.04	31	301.00	9.33	10	301.00	3.01	21	301.00	6.32	31	301.00	9.33
55	Thungabhadra	6	301.00	1.81	0	301.00	0.00		301.00	0.00		301.00	0.00	0		0.00
56	Wind Energy (BSES)	0	301.00	0.00	0	301.00	0.00	0	301.00	0.00	0	301.00	0.00	0		0.00
	TOTAL E	226	301.00	68.03	222	301.00	66.82	132	301.00	39.73	90	301.00	27.09	222	301.00	66.82
	F.OWN GENERATION															
	(i) Hydel															
57	Shivasamudram	100			111			39			72			111		
58	Shimshapura	85			83			30			53			83		
59	Munirabad	80			94			19			75			94		
60	T.B.Dam	35			41			12			29			41		

61	MGHE.Jog	140			40					35.42	40		49.58	40		85.00
62	(ii) Diesel Yalahanka	740			740			250	294.00	73.50	490	294.00	144.06	740	294.00	217.56
	TOTAL F	1180	260.17	307.00	1109	276.83	307.00	350	311.20	108.92	759	255.13	193.64	1109	272.82	302.56
	GROSS ENERGY AVAILABLE	28619	148.65	4254.19	27197	141.55	3849.63	10742	142.65	1532.37	16189	133.88	2167.37	27197	136.03	3699.74

ANNEXE - 4

KARNATAKA POWER TRANSMISSION CORPORATION LIMITED

ELECTRIC POWER TARIFF-2000
ORDER DATED 18TH DECEMBER, 2000
EFFECTIVE FROM

1. **- 2000 FOR HT INSTALLATIONS**
2. **THE FIRST METER READING DATE ON OR AFTER - 2000 FOR LT INSTALLATIONS**

GENERAL CONDITIONS

GENERAL TERMS AND CONDITIONS OF TARIFF: (APPLICABLE TO BOTH HT AND LT)

1. Supply of power is subject to the execution of agreement by the consumer in the prescribed form, payment of prescribed deposits and compliance of terms and conditions as stipulated in the Electricity Supply Regulations 1988 / *KERC (Electricity Supply & Distribution) Code-2000-01 at the time and continuation of power supply is subject to the compliance of the said Regulations as amended from time to time.

2. The tariffs are applicable to only single point of supply unless otherwise approved by the Licensee.

3. The Licensee does not bind itself to energise any installation, unless the consumer guarantees the minimum charges. The minimum charge is the power supply charges in accordance with the tariff in force from time to time or the line minimum charges, if any, whichever is higher. This shall be payable by the consumer until power supply agreement is terminated, irrespective of the installation being in service or under disconnection. However the line minimum charges, if any, are payable only during initial agreement period of 7 years. Line minimum charges are not applicable when cost towards service line extension (Infrastructure Charges/Development Charges) is collected from the consumer.

4. The tariffs in the schedule are applicable to power supply within Karnataka state.

5. The tariffs are subject to levy of Tax and surcharges thereon as may be decided by the State Government.

- **KERC (Electricity Supply & Distribution) Code-2000-01 is under finalisation by KERC and will be issued shortly. Until then Electricity Supply Regulations 1988 with its upto date amendments is applicable unless specifically provided otherwise in the Tariff order. Hence both ESR 1988 / KERC (E S & D) Code-2000-01 are mentioned.**

6. For the purpose of these tariffs, the following conversion table would be used:

1 HP=0.746 KW. 1HP=0.878 KVA.

7. The bill amount will be rounded off to the nearest Rupee, i.e., the bill amount of 50 Paise and above will be rounded off to the next Rupee and amount less than 50 Paise will be ignored.

8. Use of power for temporary illumination in the premises already having permanent power supply for marriages, exhibitions in hotels, sales promotions etc., is limited to sanctioned load at applicable permanent power supply tariff rates. Temporary tariff rates will be applicable in case the load exceeds sanctioned load as per ESR 1988/ KERC (ES&D) Code, 2000-01.

9. No LT power supply will be given where the requisitioned load is 50 KW/67 HP and above. This condition does not apply for installations serviced under MS Building Regulations ie.Regn.9 of ESR 1988/ KERC (ES&D) Code, 2000-01. However the applicant is at liberty to avail HT supply for lesser loads. The minimum contract demand for HT supply shall be 25 KVA or as amended from time to time by the Licensee with the approval of KERC.

10.The consumer shall not resell electricity purchased from the licensee to third party except

(a) If the consumer holds a sanction or a tariff provision for distribution and sale of energy,

(b) Under special contract permitting the consumer for resale of energy in accordance with the provisions of contract.

11. Non-receipt of the bill by the consumer is not a valid reason for non-payment. The consumer shall notify the office of issue of the bill if the same is not received within 7 days from the meter reading date. Otherwise, it will be deemed that the bills have reached the consumer in due time.

12. The Licensee will levy the following **charges for non-realization of each Cheque**

1	Cheque amount upto Rs. 10,000/-	5% of the amount subject to min of Rs.100/-
2	Cheque amount of Rs. 10,001/- and upto Rs. 1,00,000/-:	3% of the amount subject to min of Rs.500/-
3	Cheque amount above Rs. 1 Lakh :	2% of the amount subject to min of Rs.3,000/-

13. In respect of power supply charges paid by the consumer through money order, Cheque/DD sent by post, receipt will be drawn and consumer has to collect the same.

14.In case of any belated payment, simple interest at the rate of 2% per month will be levied on the actual No. of days of delay subject to a minimum of Rs.1 for LT installation and Rs.100 for HT installation. However no interest is levied for arrears of Rs.10/- and less.

15. All LT consumers except Bhagya Jyothi and Kutir Jyothi, shall provide current limiter/Circuit Breakers of capacity prescribed by the Licensee depending upon the sanctioned load.

16.All payments made by the consumer will be adjusted in the following order of priority: -

a. Interest on Tax arrears

b. Tax arrears
c. Interest on Revenue Arrears
d. Revenue Arrears

(e) Current month's Power supply charges

17. For the purpose of billing, the higher of the rated load or sanctioned load in respect of LT installations which are not provided with Electronic Tri-Vector meter and in respect of installations provided with Electronic Tri-Vector meter, sanctioned load or MD recorded which ever is higher will be considered. However penalty and other clauses shall apply if sanctioned load is exceeded.

18. Until further orders, the existing rates of Fuel **escalation charge of 25 paise** per unit in addition the tariff rates, will be levied on all the category of consumers, except on categories coming under LT-1 (a), LT-4 (a), LT-4 (b),

LT-4(c), Street lighting installations coming under LT-6 (a) & LT-6 (b), LT-7, and HT-3 (a) Tariff schedules. However the rate of **Fuel escalation charge** is subject to change, which is to be approved by K.E.R.C. from time to time.

19. The bill amount shall be paid within 15 days from the date of presentation of the bill failing which the interest becomes payable.

20. For individual installations more than one meter shall not be provided under the same tariff. Wherever two or more meters are existing for individual installation the sum of the consumption recorded by the meters shall be taken for billing, till they are merged.

21. In case of multiple connections in a building all the meters shall be provided at one easily accessible place in the ground floor / cellar floor.

22. **Reconnection charges:** The following reconnection charges shall be levied incase of disconnection and included in the monthly bill.

For reconnection of:

(a) Single Phase Domestic Lighting Consumers: Rs.20/-per Instn.

(b) Single Phase - other Consumers

including AEH both S.Ph / 3Ph. : Rs.50/-per Instn.

(c) All consumers other than AEH connected

with 3 Phase supply: Rs. 100/-per Instn.

(d) All HT& EHT installations: Rs. 500/-per Instn.

23**. In respect of revenue payments up to and inclusive of Rs.10, 000/- shall be made by <u>cash or cheque or D.D</u> and payments <u>above Rs.10, 000/- shall be made by cheque or D.D.</u>**

Payments under <u>other heads of account</u> shall be made by cash or D.D up to and inclusive of Rs.10, 000/- and above Rs.10, 000/-shall be by D.D only.

24. The ESR 1988 / KERC (Electricity Supply & Distribution) Code 2000-01 and amendments issued thereon from time to time will prevail over the extract given in the tariff book in the event of any discrepancy.

PART-1

HIGH TENSION SUPPLY

Applicable to Bulk Power Supply of Voltages of 11KV (including 2.3/4.6 KV) and above at Standard High Voltage or Extra High Voltages when the contract Demand is

50 KW / 67 HP and above.

PART-1

HIGH TENSION SUPPLY

CONDITIONS APPLICABLE TO HT INSTALLATIONS AND BILLING:

Applicable to bulk Power Supply of Voltages of 11 KV (including 2.3/4.6 KV) and above at standard H.V. or EHV when the C.D. is **50 KW / 67 HP** and above.

1.Billing Demand:

A. The billing demand shall, during unrestricted period, be the maximum demand recorded during the month or 75% of the CD, whichever is higher

B. When the Licensee has imposed demand cut of 25% or less, conditions stipulated in (A) shall apply.

C. When the demand cut is in excess of 25%, the billing demand shall be the maximum demand recorded or 75% of the restricted demand, whichever is higher.

D. If at any time maximum demand recorded exceeds the CD or the demand entitlement or opted demand entitlement during the period of restrictions, if any, the consumer shall pay for the quantum of excess demand at TWICE the normal rate per KVA per month as deterrent charges. If the time of day Meter is fixed and operational there will be no penalty for over drawal upto 1.2 times the Contract Demand during off peak hours provided the Licensee has declared the peak and off peak periods. For over drawal during peak periods, the penalty shall be TWICE the normal rate.

E. During the periods of disconnection, the billing demand shall be 75% of CD or 75% of the demand entitlement that would have been applicable, had the installation been in service whichever is less. This provision is applicable only if the installation is under disconnection for the entire billing month.

F. During the period of energy cut, the consumer may get his demand entitlement lowered, but not below the percentage of energy entitlement, (E.g., In case the energy entitlement is 40% and the demand entitlement is 80%, the re-fixation of demand entitlement cannot be lower than 40% of the CD). The benefit of lower demand entitlement will be given to effect from the meter reading date of the same month, if the option is exercised on or after 15th of the month. If the option is exercised on or after 16th of the month, the benefit will be given to effect from the next meter reading date. The consumer shall register such option by paying processing fee of Rs.100/- at the Jurisdictional sub-division office.

i. The billing demand in such cases shall be the "Revised (Opted) Demand Entitlement" or the recorded demand, which ever is higher. Such option for reduction of demand entitlement is allowed only once during the entire span of that particular "Energy Cut Period". However, the consumer can opt for a higher demand entitlement upto the level permissible under the demand cut notification and the benefit will be given effect to from the next meter reading date. Once the consumer opts for enhancement of demand, which has been reduced under Clause (F), no further revision is permitted during that particular energy cut period.

ii. The opted reduced demand entitlement will automatically cease to be effective when the energy cut is revised. However the facility for reduction and enhancement can be exercised afresh by the consumer as indicated in the previous paras.

G). For the purpose of billing, the billing demand of 0.5 KVA and above will be rounded off to the next higher KVA and billing demand of less than 0.5 KVA should be ignored.

H). Whether an institution availing HT supply is charitable or not will be decided by the Licensee on the production of certificate Form-12 A from Income Tax department.

2. Power factor (PF):

It shall be the responsibility of HT consumer to determine the capacity of PF correction apparatus and maintain an average PF of not less than 0.85.

(i). The specified P.F. is 0.85. If the power factor goes below 0.85 Lag, a surcharge of 1 Paise per unit consumed will be levied for every reduction of P.F. by 0.01 below 0.85 Lag.

(ii). The power factor when computed as the ratio of KWh / KVAh will be determined up to 3 decimals (ignoring figures in the other decimal places) and then rounded off to the nearest second decimal as illustrated below:

a. 0.8449 to be rounded off to 0.84
b. 0.8451 to be rounded off to 0.85

In respect of Electronic T.V. meters, the recorded average PF over the billing period shall be considered for billing purposes. If the same is not provided the ratio of KWh to KVAh consumed in the billing month shall be taken.

3. Rebate for supply at high voltage:

If the consumer is availing power at voltage higher than 13.2 KV, he will be entitled to a rebate as indicated below:

Supply Voltage : Rebate

A. 33/66 KV: 1 Paise/unit of energy consumed
B. 110 KV: 2 Paise/unit of energy consumed
C. 220 KV: 3 Paise/unit of energy consumed

The above rebate will be allowed in respect of all the above voltage class installations and also for installations converted from 13.2 KV and below to 33 KV and above from the next meter reading date after notification of this Tariff order. The above rebate is applicable only on the consumption of normal energy consumed by the consumer and is not applicable on any other energy allotted and consumed, if any, viz.,

i) High Cost Energy

ii) Night Energy

iii) DGP Energy

iv) Wheeled Energy

v) Any energy allotted extra over and above normal entitlement and

vi) Excess energy consumed beyond the normal entitlement.

The above rebate is not applicable for Railway Traction.

4. In respect of Residential Quarters/ Colonies availing Bulk power supply by tapping the main HT supply, the energy consumed by such Colony loads metered at single point shall be billed under HT-5 tariff schedule. No reduction in demand recorded in the main HT meter will be allowed.

5. Energy supply may be utilised for all purposes associated with the working of the installations such as Office, Stores, Canteens, Yard Lighting, Water Supply and Advertisements within the premises.

6. Energy can also be used for construction, modification and expansion purposes within the premises.

7.Power supply under HT-5 tariff schedule may be used for Commercial and other purposes inside the colony for installations such as Canteen, Club, Shop, Auditorium etc., provided this load is less than 10% of the CD.

8. In respect of Residential Apartments availing HT Power supply under HT-5 tariff schedule, the supply availed for Commercial and other purpose like Shops, Hotels, etc., will be billed under appropriate tariff schedule (Only Energy charges) duly deducting such consumption in the main HT supply bill. No reduction in the recorded demand of the main HT meter is allowed. Common areas shall be billed at Tariff applicable to predominant consumer category.

TARIFF SCHEDULE HT 1

(Public water Supply and Sewerage Pumping Installations)

Applicable to Water Supply and Sewerage Pumping installations belonging to Bangalore Water Supply and Sewerage Board, Karnataka Urban water Supply and Sewerage Board, other local bodies, State and Central Government.

RATE SCHEDULE

Demand charges:

Rs.150/- per KVA of billing demand per month

PLUS

Energy Charges:

230 Ps. Per unit for all the units consumed in the month.

NOTE: Energy supplied to residential quarters availing bulk supply by the above category of consumer shall be metered separately at a single point and the energy consumed shall be billed at HT-5Tariff. No reduction in the demand recorded in the main HT meter will be allowed.

TARIFF SCHEDULE HT-2

(Industrial, Non-industrial, Non-Commercial & Commercial)

TARIFF SCHEDULE HT-2(a)

(Industrial, Non-industrial, Non-commercial)

APPLICABLE to Industries, Factories, Workshops, Universities, Educational Institutions belonging to Government, Local bodies, Aided Institutions, Hostels of all Educational Institutions, Research & Development Centres, Industrial Estates, Milk dairies, Rice Mills, Phova Mills**,** Roller Flour Mills, News Papers, Printing Press, Railway Workshops/KSRTC Workshops/ Depots, Crematoriums, Cold Storage, Ice & Ice-cream mfg. Units, Swimming Pools of local bodies, Water Supply Installations of K.I.A.D.B. and other industries, all Defence Establishments. Hatcheries, Poultry Farm, Museum, floriculture, Green House, Bio Technical Laboratory, Hybrid Seeds processing Units, Stone Crushers, Bakery Product Manufacturing Units, Mysore Palace illumination, Film Studios, Dubbing Theatres, Processing, Printing, Developing and Recording Theaters, Tissue Culture, Aqua Culture, Prawn Culture, Information Technology Industries engaged in development of Hardware & Software, Drug Mfg. Units, Garment Mfg. Units, Tyre retreading units, Hospitals run by Charitable Institutions & ESI Hospitals, Nuclear Power Projects, Stadium maintained by Government and local bodies. And also Railway Traction, **Effluent treatment plants, Drainage water treatment plants, LPG bottling plants and petroleum pipeline projects.**

RATE SCHEDULE

Demand Charges:

Rs.150/- per KVA of billing demand per month.

PLUS

Energy Charges:

325 Ps. per unit upto 1 lakh units.

375 Ps. per unit for balance units consumed in the month.

Note: Energy charges for **all Units** consumed by Railway Traction and Effluent treatment plants shall be 325 paise per unit.

TARIFF SCHEDULE HT-2(b)

(COMMERCIAL)

Applicable to Commercial Complexes, Cinemas, Hotels, Boarding & Lodging, Amusement Parks, Telephone Exchanges, Private Hospitals & Nursing Homes, Race Course, Turf Clubs, T.V.Station, All India Radio, Railway Stations, Air Port, KSRTC bus stations, All offices, Banks, Commercial Multi-storied buildings, Private Educational Institutions, Un-aided Educational Institutions, APMC Yards, Stadiums other than those maintained by Government and Local Bodies, Construction power for industries, irrigation, Power Project and Konkan Railway Project and all other installations not covered under any other HT Tariff Categories.

RATE SCHEDULE

Demand charges:

Rs.180/- per KVA of billing demand per month

PLUS

Energy Charges:

400 Ps. per unit upto 2 lakh units.

430 Ps. per unit for balance units consumed in the month.

NOTE: APPLICABLE TO HT-2(a), & HT-2(b) TARIFF SCHEDULE

1. Energy supplied may be utilised for all purposes associated with the working of the installation such as offices, stores, canteens, yard lighting, water pumping and advertisement within the premises.
2. Energy can be used for construction, modification and expansion purposes within the premises.

TARIFF SCHEDULE HT-3

(Irrigation and Agricultural Farms, Lift irrigation Schemes/ societies, Government Horticultural Farms, Private Horticulture nurseries, Coffee, Tea ,Coconut & Arecanut Plantations)

TARIFF SCHEDULE HT-3(a)

(Irrigation and Agricultural Farms, Lift irrigation Schemes/ societies, Government Horticultural Farms).

RATE SCHEDULE

Energy Charges / Minimum Charges:

135 Ps. Per unit subject to an annual minimum of **Rs.800/- per HP** or part thereof of sanctioned load.

TARIFF SCHEDULE HT-3(b)

(Private Horticulture Nurseries, Coffee, Tea, Coconut &Arecanut Plantations)

RATE SCHEDULE

Energy Charges /Minimum Charges:

275 Ps. per unit subject to an annual minimum of **Rs. 800/- per HP** or part thereof of sanctioned load.

Note: These installations are to be billed on quarter yearly basis.

TARIFF SCHEDULE HT-4

(Rural Electric Co-Operative Societies)

RATE SCHEDULE

Demand Charges: Nil

PLUS

Energy Charges:

61Ps. per unit for all the units consumed in the month.

The rate will continue till Separate Tariff is determined and notified by KERC.

TARIFF SCHEDULE HT-5

(Residential apartments and colonies availing

Power Supply independently & Govt. Hospitals)

Applicable to Residential apartments and colonies availing power supply independently. It is also applicable to Residential colonies and residential quarters of industries/Non industrial establishment whether situated within the premises or outside, power supply can be used for residences, theatres, shopping facility, club, hospital, guest house, yard/street lighting, canteen located within the colony. **Also applicable to Hospitals, dispensaries, Health Centres run by State/Central Govt. & Local bodies.**

Demand Charges:

Rs.75/- per KVA of billing Demand per month

PLUS

Energy Charges:

285 Ps. per unit for all the units consumed in the month.

NOTE: (1) In respect of residential colonies availing power supply by tapping the main H.T. supply of the industry/non industrial establishment, the energy consumed by such colony loads metered at a single point is to be billed at the above energy rate. No reduction in the recorded demand of the main H.T. supply is allowed.

1. Energy under this tariff may be used for commercial & other purposes inside the colonies for installations such as Canteens, Clubs, Shops, Auditorium etc., provided this commercial load is less than 10% of the Contract demand.

In respect of Residential apartments as defined in Regn. 9.00 of ESR 1988 /KERC (ES&D) Code 2000-01 where power supply is availed for commercial and other purposes also like Shops, Hotels, Floor Mills etc, such installations will be billed under appropriate tariff schedule (Only energy charges) duly deducting such consumption in the main H.T. supply bill. No reduction in the recorded demand of the main H.T. meter is allowed.

PART-II

LOW TENSION SUPPLY

(400 Volts Three Phase and

230Volts Single Phase Supply)

CONDITIONS APPLICABLE TO LT INSTALLATIONS AND BILLING:

1.Demand based Tariff

Incase of LT Industrial consumers, **Demand based Tariff** at the option of the consumer can be adopted. In such cases the billing demand will be the sanctioned load or Maximum Demand recorded in the Tri-Vector Meter during the month which ever is higher. If the Maximum Demand recorded is more than the sanctioned load penal charges at twice the normal rate shall apply.

2.Besides lighting, electricity under Tariff Schedule domestic and non-domestic can be used for Fans, TVs, Radio Receivers, Water Pumps of Fractional HP, Refrigerators and other small Household Appliances.

3. In respect of Domestic lighting installations the sanction of power is limited to 1.0 KW or as prescribed by the Licensee from time to time with the approval of KERC.

4.Use of power within the consumer premises for bonafide temporary purpose is permitted subject to the conditions that total load of the installation on the system does not exceed sanctioned load.

5.Where it is intended to use power supply for floor polishing and such other portable equipments temporarily in a premises having permanent power supply such equipments shall be provided with earth leakage circuit breakers of adequate capacity.

6.The laboratory installations in educational institutions are allowed to install connected machineries up to 4 times the sanctioned load. The fixed charges shall however be on the basis of sanctioned load. In case Electronic Tri-vector meter is installed and option for Demand based Tariff is given the billing shall be on the MD recorded or sanctioned load whichever is higher irrespective of the connected load. If the M.D.recorded is more than the sanctioned load penal charges at twice the normal rate shall apply.

7.Besides combined lighting and heating, electricity under tariff schedules

LT2 (a) & LT2 (b) can be used for Fans, Televisions, Radios, Refrigerators and other household appliances including domestic water pumps and air conditioners provided they are under one meter connection. If a separate meter is provided for Air-conditioner load, the consumer shall be served with a notice to merge this load and to have a single metering for the entire load. Till such time the air conditioner load will be billed under Commercial Tariff.

8. Bulk LT supply

If power supply for lighting {LT 1 (b)} and combined lighting & heating {LT 2(a)} is availed through a bulk Meter for group of houses belonging to one consumer (ie, Where bulk LT supply is availed), the billing for energy shall be done at the slab rate for energy charges matching the consumption obtained by dividing the bulk consumption by number of houses. In addition, fixed charges for sanctioned load shall be charged at normal rates.

9.Rural Rebate:

Rebate on fixed Charges for AEH and LT 5 categories at the following rates are extended to rural consumers fed from feeders which are subjected to load shedding for 6 hours or more daily. This is applicable for the period when rural load shedding as notified by the Licensee is in force.

a) Rebate on fixed Charges **for AEH category: Rs.5/-per KW** (Minimum of Rs.60/- per installation per month is not applicable for installations eligible for this Rebate)
b) Rebate on fixed charges **for LT 5 category : Rs.10 /- per HP** of sanctioned load

10. A rebate of 25 Paise per unit will be given for the House/School/Hostels meant for Handicapped, Aged, Destitutes and Orphans, Rehabilitation Centres under Tariff schedule LT 2(a).

11.A rebate of 15 Paise per unit will be allowed in respect of Tariff schedules

LT 2(a) if solar water heaters are installed and used.

12. A rebate of 20% on fixed charges and energy charges will be allowed in the monthly bill in respect of public Telephone booths having STD/ISD/ FAX facility run by handicapped people under Tariff schedule LT 3.

13. A rebate of 2 paise per unit will be allowed if capacitors are installed in IP Set Installations as per Regulation 24 of ESR-1988 / KERC (ES&D) CODE, 2000-01 for LT-4(c) & LT-4 (d) Tariff and also metered IP Sets under LT-4 (a) & LT-4 (b).

14.Power Factor (PF) :

Appropriate size Capacitors shall be installed in accordance with Electricity Supply Regulation 1988 / KERC (Electricity Supply and Distribution) Code,

2000 –01 in case of installations covered under Tariff category LT 3, LT 4, LT 5, & LT 6 where motive power is involved.

(i). The specified P.F. is 0.85. If the PF is found to be less than 0.85 Lag,

a surcharge of 1 Paise per unit consumed will be levied for every reduction of P.F. by 0.01 below 0.85 Lag. However in respect of LT installations, this is subject to a maximum surcharge of 15 Paise per unit.

(ii). The power factor when computed as the ratio of KWh/KVAh will be determined up to 3 decimals (ignoring figures in the other decimal places) and then rounded off to the nearest second decimal as illustrated below:

a. 0.8449 to be rounded off to 0.84
b. 0.8451 to be rounded off to 0.85

In respect of Electronic T.V. meters, the recorded average PF over the billing period shall be considered for billing purposes.

(iii) In case of installations without electronic Tri-vector meters, if during the rating of the installation the PF is found to be less than 0.85, a surcharge determined as above shall be levied from the billing month following the expiry of one month notice given by the Licensee, till such time the additional capacitors are installed and informed to the Licensee in writing by the consumer. In case of installations having electronic Tri-vector meters the penalty will be levied from the month in which low PF is recorded.

15. During the inspection, if the capacity of capacitors provided is found to be less than what is stipulated in Electricity Supply Regulations 1988 / KERC (Electricity Supply and Distribution) Code, 2000-01, a surcharge of 15 Paise/unit will be levied in case of installations covered under Tariff category LT 3, LT 5, & LT 6 where motive power is involved.

16. All new IP set applicants shall fix capacitors of adequate capacity in accordance with Electricity Supply Regulation 1988 / KERC (Electricity Supply and Distribution) Code, 2000 –01 to their installation before taking service.

17. All existing IP set consumers shall also fix capacitors of adequate capacity in accordance with Electricity Supply Regulation 1988 / KERC (Electricity Supply and Distribution) Code, 2000 –01 failing which **PF surcharge at the rate of Rs.60/-per HP/ year** shall be levied. If the capacitors are found to be removed / not installed, a penalty at the same rate as above (Rs. 60/-per HP / Year) will be levied.

18.The Semi-permanent cinemas having Semi-permanent structure with permanent wiring and license of not less than one year will be billed under commercial tariff schedule.

19.Touring cinemas having an outfit comprising cinema apparatus with accessories taken from place to place for exhibition of cinematography films and also outdoor shooting units will be billed under Temporary Tariff schedule ie,LT 7.

20.The energy supplied under IP set tariff schedule the consumers should use the energy only for pumping water to irrigate their own land as stated in the IP set application/water right certificate. Otherwise such installations will be billed under appropriate Industrial / Commercial tariff based on the consumption computed as per the table given in the ESR 1988 / KERC (Electricity Supply and Distribution) Code, 2000-01 or on the entire consumption where energy consumption is recorded.

21.The water pumped for agricultural purposes may also be used by the consumer for his bonafide drinking purposes and for supplying water to animals, birds and fish farms maintained by him in addition to agriculture

22.The motor of IP set installations can be used with an alternative drive for other agricultural operations like sugar cane crusher, coffee pulping, etc., with the approval of the Licensee. The energy used for such operation shall be metered separately by providing alternate switch and charged at LT Industrial Tariff during the period of alternative use. However, if the energy used both for IP Set and alternate operation is measured together by one energy meter, the energy used for alternate drive shall be estimated by deducting the average IP Set consumption for that month as per the IP sample meter readings for the sub division as certified by the sub divisional Officer.

23.The IP consumer is permitted to use energy for lighting the pump house and well only with two lighting points of 40 Watts each.

24.For IP sets of 10 HP and below, the billing will be made half yearly for unmetered connections and quarterly for metered connections and for those above 10 HP the billing will be made quarterly.

25. In case of welding transformers, the connected load shall be taken as:

a. Half the maximum capacity in KVA as per name plate specified under IS: 1851

OR

b) Half the maximum capacity in KVA as recorded during the rating by Licensee, which ever is higher.

26. Electricity under Tariff LT 3 / LT 5 can also be used for Lighting, Heating and Air-conditioning, Yard-Lighting, water supply in the premises of Commercial / Industrial Units respectively.

27. Florescent fittings will be provided by the Licensee for the Streetlights in the case of villages covered under Licensee's electrification programme for initial installation.

In all other cases the entire cost of fittings including Brackets, Clamps, etc., and labour for replacement, additions and modifications shall be met by the organisations making such a request. Labour charges shall be paid at the standard rates fixed by Licensee for each type of fittings.

28. Lamps, fittings and replacements for defective components of fittings shall be supplied by the concerned Village Panchayath, Town Panchayaths or Municipalities for replacement.

29.Fraction of KW shall be rounded off to the nearest quarter KW for billing purpose and the minimum billing being for 0.25 KW in respect of Streetlight installations.

Part-II

Low tension supply

(400V three phase and 230 V single phase supply)

Tariff schedule LT-1(a)

(Bhagyajyothi and Kutirajyothi)

Applicable to installations serviced under Bhagyajyothi and Kutirajyothi schemes.

Rate schedule

Energy charges:

Rs. 10/- per installation per month

Note: The above charges include the monthly installment towards recovery of service main charges.

TARIFF SCHEDULE LT-1(b)

(Domestic lighting, Non Domestic, Non Commercial Lighting Installations and Government Hospitals lighting)

Applicable to purely residential houses and also to houses used for residential purposes, but a portion of which is used by occupants for (a) Handloom weaving (b) Silk rearing and reeling and Artisan using motors up to 200 W.(c) Consultancy in (i) Engineering (ii) Architecture (iii)Medicine (iv)Astrology (v) Legal matters (vi) Income Tax (vii) Chartered Accountancy(d) Job typing (e) Tailoring (f) Post Office (g) Gold Smithy (h) Chakwi rearing (i) Paying Guests (j) Personal Computers (k) Dhobis (l) Hand operated Printing Press (m) Beauty Parlours.

It is also applicable to (a) Schools and Hostels meant for handicapped, aged, destitutes and orphans (b) Rehabilitation centers run by Charitable Institutions. (c) Hospitals, Dispensaries, Health Centers run by State / Central Government and Local Bodies. (d) Railway staff Quarters with single meter. (e) Farm Houses (f) AIDS and Drug Addicts Rehabilitation Centers.(g**) fire service stations**

It is also applicable to (a) Temples, Mosques, Churches, Gurudwaras, Ashrams, Mutts and Religious /Charitable Institutions (b) Hospitals Dispensaries and Health Centers run by Charitable Institutions. (c) Jails and Prisons (d) School, Colleges, Educational Institutions run by state/Central Government/ Local Bodies (e) Seminaries (f) Hostels (g) Guest Houses/Travellers Bungalows run by state/Central Govt./Religious/Charitable Institutions (j) Public Libraries (k) Public Telephone Booths without STD/ISD/FAX facility run **by handicapped people** (l) Sulabh Souchalayas (m) Viswa Sheds having Lighting Loads only

RATE SCHEDULE

Fixed Charges:

Rs.20/- per KW or part thereof of sanctioned load for two months.

PLUS

Energy Charges: For the units consumed in two months

125 Ps. Per unit for First **60** units

205 Ps. Per unit for next **140** units.

When consumption in two months exceeds **200** units, the entire consumption shall be billed at LT-2 (a) tariff including fixed charges and Electricity Tax.

NOTE: Applicable to LT-1 (b) Tariff Schedule

1. Besides lighting Electricity can be used under this schedule for fans, TVs, Radio Receiver, Water Pumps of fractional Hp, Refrigerators and other small house hold appliances.
2. In respect of Domestic installations the sanction of Electricity under this Tariff is limited to 1KW or as prescribed by the

Licensee from time to time, which shall be approved by K.E.R.C.

3. Use of power within the consumer premises for temporary purposes for bonafide use is permitted subject to the condition that the total load of the installation on the system does not exceed the sanction load.

TARIFF SCHEDULE LT-2(a)

(Domestic combined lighting, Heating and motive Power-A.E.H., Non-Domestic, Non-commercial combined lighting Heating and motive power, Also applicable to Govt. Hospitals and Hostels for handicapped Orphans. Aged & destitute.)

Applicable to residential houses having mixed loads, also to houses having mixed loads of lighting, heating and motive power used for residential purposes but a portion of which is used by the occupant for (a) Handloom weaving (b) Silk rearing and reeling and artisans using motors upto 200 watts (c) Consultancy in (i) Engineering (ii) Architecture (iii) Medicine (iv) Astrology (v) Legal matters (vi) Income tax (vii) Charted Accountants (d) Job typing (e) Tailoring (f) Post Office (g) Gold smithy (h) Chawki rearing (i) Paying guests (j) personal Computers (k) Dhobis (l) Hand operated printing press (m) Beauty Parlours (n) Water Supply installations, , Lift independently serviced for bonafide use of residential complexes/residence, (o) Farm Houses and yard lighting limiting to 120 Watts.

Also applicable to (i) Hospitals, Dispensaries, Health Centers run by State/Central Govt. and local bodies. (ii) Houses, schools and Hostels meant for handicapped, aged destitute and orphans (iii) Rehabilitation Centres run by charitable institutions, AIDS and drug addicts Rehabilitation Centres.

It is also applicable to (a) Temples, Mosques, Churches, Gurudwaras, Ashrams, Mutts and religious/Charitable institutions (b) Hospitals, Dispensaries and Health Centres run by Charitable institutions including X-ray units (c) Jails and Prisons (d) School, Colleges, Educational institutions run by State/Central Govt.,/Local Bodies (e) Seminaries (f) Hostels (g) Guest Houses/Travelers Bungalows run by State/Central Govt./Religious/Charitable institutions (h) Public libraries (i) Silk rearing (j) Museum (k) Illumination of Historical Monuments of Archeology Departments.

RATE SCHEDULE

Fixed Charges:

Rs.20/- per KW or part thereof of sanctioned load subjected to a minimum

of **Rs.60/-** per installation per month.

PLUS

Energy Charges: for Units consumed in a month

205 Ps. per unit for the First **100 units**

255 Ps. per unit for the next**100 units**

300 Ps. Per unit for the next**100 units**

350 Ps. Per unit for the next**100 units**

425 Ps. Per unit for the consumption in excess of 400 **Units.**

Rural REBATE:

Rebate on fixed Charges for LT 2(a) category at the following rate shall be extended to rural consumers fed from feeders which are subjected to load shedding for 6 hours or more daily. This is applicable for the period when rural load shedding as notified by the Licensee is in force.

Rs.5/-per KW (Minimum of Rs.60/- per installation per month is **not applicable** for installations eligible for this Rebate

TARIFF SCHEDULE LT-2(b)

(Private Professional and other private educational institutions including aided, unaided institutions having only lighting or combined lighting & heating, and motive power)

Fixed Charges:

Rs.30/- per KW or part thereof of sanctioned load subjected to a minimum **Rs.60/-**per installation per month.

PLUS

Energy Charges: for Units consumed in a month

350 Ps. per unit for the First **100 units**

400 Ps. per unit for the next **100 units**

425 Ps. Per unit for the next 2**00 units**

470 Ps. Per unit for the consumption in excess of **400 Units.**

Note: {Applicable to LT-2 (a), LT-2 (b) Tariff Schedule}

1. A rebate of 25 Ps. Per unit will be given for a house/ School/ Hostels meant for Handicapped, Aged, Destitute and Orphans, Rehabilitation Centres run by Charitable Institutions.
2. (a) Use of power within the consumer's premises for temporary purposes for bonafied use is permitted subject to the condition that the total load of the installation on the system does not exceed the sanctioned load.

   (b) Where it is intended to use for floor polishing and such other portable equipment temporarily in premises having permanent supply, such equipment shall be provided with an earth leakage circuit breaker of adequate capacity.
3. The laboratory installations in educational institutions are allowed to install connected machineries up to 4 times the sanctioned load. The fixed charges shall however be on the basis of sanctioned load. In case Electronic Tri-vector meter is installed and option for Demand based Tariff is given the billing shall be on the MD recorded or sanctioned load whichever is higher irrespective of the connected load. If the M.D.recorded is more than the sanctioned load penal charges at **twice** the normal rate shall apply.

4. Besides lighting and Heating Electricity under this schedule can be used for fans, Televisions, Radios, Refrigerators and other house-hold appliances including domestic water pump and air conditioners, provided they are under one meter connection. If a separate meter is provided for Air conditioner Load, the consumption shall be under commercial tariff

till it is merged with main meter.

5. A rebate of 15 Ps. Per unit shall be allowed in respect of LT-2 (a) category consumers, if solar water heaters are installed and used.

TARIFF SCHEDULE LT-3

(Commercial Lighting, Heating and Motive Power)

Applicable to Nursing Homes, **Private Hospitals**, Clinics, Diagnostic Center, X Ray units, Shops, Stores, Hotels/Restaurants/Boarding and Lodging Homes, Bars, Private guest Houses, Clubs, Kalyan Mantaps/Choultry, permanent Cinemas/ Semi Permanent Cinemas, Theatres, Petrol Bunks, Petrol, Diesel and oil Storage Plants, Service Stations/ Garages, Banks, Telephone Exchanges. T.V Stations, Microwave Stations. All India Radio, Dish Antenna, Public Telephone Booths/ STD, ISD, FAX Communication Centers, Stud Farms, Race Course, Ice Cream Parlours, Computer Centres, Photo Studio/ colour Laboratory, Xerox Copiers, Railway Installation excepting Railway workshop, KSRTC Bus Stations excepting Workshop, All offices, Police Stations, Commercial Complexes, Lifts of Commercial Complexes, Battery Charging units, Tyre Vulcanizing Centres, Post Offices, Bakery shops, Tailoring Shops, Beauty Parlours, Stadiums other than those maintained by Govt. and Local Bodies**, Private Advertising Posts / Sign boards in the interest of Public such as Police Canopy Direction boards and other sign boards sponsored by the Private Advertising Agencies. It is also applicable to water supply pumps and street lights not covered under LT 6.**

RATE SCHEDULE

Fixed Charges:

Rs.35/- Per KW or part thereof of sanctioned load. (No Monthly Minimum)

PLUS

Energy Charges: for Units consumed in a month

415 Ps. per unit for the First **50 units**

500 Ps. Per unit for the consumption in excess of **50 units**.

Note:

1. Besides lighting, Heating and Motive power, Electricity can also be used for Yard lighting/ air Conditioning/water supply in the premises.

2. The semi permanent Cinemas should have semi Permanent Structure with permanent wiring and license of not less than one year.

3. Touring Cinemas having an outfit comprising Cinema apparatus with accessories taken from place to place for exhibition of cinematography film and also outdoor shootings units shall be billed under LT- 7 Tariff.

4-. A rebate of 20% on fixed charges and energy Charges shall be allowed

in monthly bill in respect of telephone Booths having STD / ISD/FAX facility run **by handicapped people.**

TARIFF SCHEDULE LT-4

(Agriculture, Plantation and Nurseries)

(Irrigation Pump Sets, Lift Irrigation Schemes/Societies)

Applicable to (a) Agricultural Pump Sets including Sprinklers, (b) Pump sets used in (i) Nurseries of forest and Horticultural Departments, (ii) Grass Farms and Garden, (iii) Plantations other than Coffee, Tea, Coconut and Arecanut And Private Horticulture Nurseries

RATE SCHEDULE

LT-4 (a) : Upto and inclusive of 10 HP:

50 Paise per Unit subject to an annual Minimum of Rs.300/- per HP or part thereof of sanctioned load.

Note: Till meters are fixed, a flat rate of Rs45/- per HP per Month shall be payable.

LT-4 (b): Upto and inclusive of 10 HP:

Applicable to (1) Those IP Set Consumers who have more than one IP set connection under LT 4(a), (2) Any Income Tax Payer under Income Tax Act 1961, (3) Owner of a Tractor, (4) Owner of a four Wheeled motor vehicle, (5) Any person who has a telephone connection including mobile.

135 Paise per Unit subject to an annual Minimum of Rs.600/- per HP or part thereof of sanctioned load.

Note: - Till meters are fixed, a flat rate of Rs.75/- per HP per Month shall be payable.

LT-4 (c): Above 10 HP

135 Paise .per Unit subject to **an annual minimum of Rs.800/-** per HP or part thereof of sanctioned load.

LT- 4 (d): Applicable to Private Horticulture Nurseries, Coffee, Tea, Coconut and Arecanut plantations:

175 Paise .per Unit subject to **an annual minimum of Rs.600/-** per HP or part thereof of sanctioned load.

NOTE:

1. **The energy supplied under this tariff should be used only for Pumping water to irrigate their own land as stated in the I.P. Set application/water right certificate. Otherwise such installations will be billed under appropriate Tariff (LT-3/ LT-5) based on the consumption computed as per the Table given in the ESR-1998 / KERC (ES&D) CODE, 2000-01** OR **the entire consumption where energy consumption is recorded.**

2) The motor of IP set installations can be used with an alternative drive for other agricultural operations like sugar cane crusher, coffee pulping, etc., **with the approval of the Licensee. The energy used for such operation shall be metered separately by providing alternate switch and charged at LT Industrial Tariff during the period of alternative use. However, if the energy used both for IP Set and alternate operation is measured together by one energy meter, the energy used for alternate drive shall be estimated by deducting the average IP Set consumption for that**

month as per the IP sample meter readings for the sub division as certified by the sub divisional Officer.

3) The consumer is permitted to use the energy for lighting the pump house and well only with 2 lighting points of 40 W each.

1. **The water pumped for agricultural purposes may also be used by the consumer for his bonafide drinking purposes and for supplying water to animals, birds and fish farms maintained by him in addition to agriculture.**

1. **For IP sets of 10 HP and below, the billing will be made half yearly and for those above 10 HP the billing will be made quarter yearly.**
2. **A rebate of 2 paise per unit will be allowed if capacitors are installed as per Regulation 24 of ESR-1988 / KERC (ES&D) CODE, 2000-01 for LT-4(c) & LT-4 (d) Tariff and also metered IP Sets under LT-4 (a) & LT-4 (b) Tariff.**

TARIFF SCHEDULE LT-5

(Industrial, Non-industrial, Heating & Motive power including lighting)

Applicable to industrial Units, Workshops, Poultry Farms, Sugarcane Crushers, Coffee Pulping, Cardamom drying, Mushroom raising installations, Flour, Huller & Rice Mills, Wet Grinders, Milk dairies, Dry Cleaners and Laundries having washing, Drying, Ironing etc., Bulk Ice Cream and Ice manufacturing Units, Coffee Roasting and Grinding Works, Cold Storage Plants, Bakery Product Mfg. Units, KSRTC workshops/Depots, Railway workshops, Drug manufacturing units and Testing laboratories, Printing Presses, Garment manufacturing units, Bulk Milk vending Booths, Swimming Pools of local Bodies, Tyre retreading units, Stone crushers, Chilly Grinders, Phova Mills, pulverizing Mills, Decorticators, Iron & Red-Oxide crushing units, crematoriums, hatcheries, Tissue culture, Saw Mills, Toy/wood industries, Viswa Sheds with mixed load sanctioned under Viswa Scheme, Cinematic activities such as Processing, Printing, Developing, Recording theatres, Dubbing Theatres and film studios, Agarbathi manufacturing unit., Water supply installations of KIADB & industrial units, Gem & Diamond cutting Units, Floriculture, Green House, Biotech Lab, Hybrid seed processing unit. **Information Technology industries engaged in development of hardware & Software, Silk filature units, Aqua Culture, Prawn Culture, Brick manufacturing units, Silk / Cotton colour dying. Stadium maintained by Govt. and local bodies. Fire service stations, Gold / Silver ornament manufacturing units.**

Effluent treatment plants, Drainage water treatment plants, LPG bottling plants and petroleum pipeline projects.

RATE SCHEDULE

Fixed Charges:

a) Rs.25/- per HP or part thereof per month of sanctioned load where sanctioned load is upto and inclusive of **5 HP**.

b) Rs. 30/-per HP or part thereof per month of sanctioned load where sanctioned load is above 5HP but below **40 HP**.

c) Rs.40/- per HP or part thereof per month of sanctioned load where sanctioned load is 40 **HP** & above but below **67 HP.**

d) Rs.100/- per HP or part thereof per month of sanctioned load **is 67 HP and above**

Demand based Tariff (Optional)

a. **Rs. 60/-per KW** or part thereof per month of billing demand where sanctioned load is above **5HP but** below **40 HP**.
b. **Rs.80/- per KW** or part thereof per month of billing demand where sanctioned load is 40 **HP** & above but below **67 HP.**
c. **Rs.175/- per KW** or part thereof per month of billing demand where sanctioned load **is 67 HP and above.**

PLUS

Energy Charges:

a) 225 Ps. Per unit for the First 200 Units.

b) 275 Ps. Per unit for the next 800 Units.

c) 300 Ps. Per unit for the next 3000 Units.

d) 325 Ps. Per unit for the units in excess of 4000 units.

NOTE:

1.Demand based Tariff

Incase of LT Industrial consumers, **Demand based Tariff** at the option of the consumer can be adopted. In such cases the billing demand will be the sanctioned load or Maximum Demand recorded during the month in the Tri-Vector Meter which ever is higher. If the Maximum Demand recorded is more than the sanctioned load penal charges at twice the normal rate shall apply.

2.RURAL REBATE:

Rebate on fixed Charges for LT 5 category at the following rate shall be extended to rural consumers fed from feeders which are subjected to load shedding for 6 hours or more daily. This is applicable for the period when rural load shedding as notified by the Licensee is in force.

Rebate on fixed Charges **for LT 5 category**: Rs.10/- per HP per month

3. Electricity can also be used for lighting, heating, and air-conditioning in the premises.

4. In case of welding transformers, the connected load shall be taken as (a) Half the maximum capacity in KVA as per the name plate specified under-IS1851 or (b) Half the maximum capacity in KVA as recorded during rating by Licensee whichever is higher

TARIFF SCHEDULE LT-6

(Water supply, Sewerage pumping and Streetlights / Public Lighting)

Applicable to water supply and sewerage pumping installations and public street lights/park lights maintained by local bodies, Central and State Govt., APMC, Traffic signals subways, water fountains of local bodies. Also applicable to Streetlights of residential Campus of universities, other educational institutions, Housing colonies approved by local bodies/development authority, religious institutions, industrial area/estate and notified areas.

TARIFF SCHEDULE LT-6 (a)

Applicable to water supply and sewerage pumping installations **and ALSO Applicable to Public Street lights/Park lights** of village Panchayat/Interim Mandal Panchayat, Town Panchayat, Town Municipalities and organizations run on charitable basis.

RATE SCHEDULE

Fixed Charges:

Rs 15/- per HP or Rs.20/- per KW or part thereof of sanctioned load per month

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PLUS

Energy Charges:

1. **For water supply installations**

   175 Paise Per unit for all the units consumed in the month.
2. **For Street lights / public Lighting installations**

120 Paise Per unit for all the units consumed in the month.

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Note: Till the meters are fixed to the Street lighting Installations, Rs.500/-per KW per Month shall be payable with out any Fixed charges.

TARIFF SCHEDULE LT-6 (b)

Applicable to water supply and sewerage pumping installations,

Public Streetlights/ Park lights of City Municipalities/Corporations/State and Central Govt./APMC, Traffic signals subways, water fountains of local bodies. Also applicable to Streetlights of residential Campus of universities, other educational institutions, Housing colonies approved by local bodies/development authority, religious institutions, industrial area/estate and notified areas. **And also Applicable to water supply installations in residential Layouts.**

RATE SCHEDULE

Fixed Charges:

Rs.30/- per HP or Rs.40/- per KW or part thereof of sanctioned load per month.

PLUS

Energy Charges:

1) For water supply installations

250 Paise Per unit for all the units consumed in the month

2) For Street lights / public Lighting installations

200 Paise Per unit for all the units consumed in the month.

Note: Till the meters are fixed to the Street lighting Installations Rs.800 per KW per Month shall be payable with out any Fixed charges.

TARIFF SCHEDULE LT-7

(Temporary Power Supply)

RATE SCHEDULE

ENERGY CHARGES:

600 Ps. Per unit subject to a weekly minimum of **Rs. 125 per KW** or part thereof of the sanctioned load.

If the Sanctioned load is **67 HP and above**, **Fixed charges** of **Rs.200 per HP per Month** shall be applicable in addition to **ENERGY CHARGES as above.**

NOTE:

1.Temporary power supply with or without extension of distribution main shall be **arranged through energy meter** duly observing the provisions of Regulation.13.02. of ESR 1988 / Regn.13 of KERC (ES&D) Code 2000-01.

2.This Tariff is also applicable to touring cinemas having license for less than one year.

3.All conditions regarding temporary power supply as stipulated in Electricity Supply Regulations1988 / KERC (ES&D) Code 2000-01. shall be complied with before service.

ANNEXTURE 5

Directions to Licensee in respect of Energy Audit

1. A metering plan for Energy Audit of KPTCL grid system voltage level wise such as 400 KV, 220 KV etc. should be prepared and shall be submitted to the Commission within 3 months from the date of this order. The work of procurement of metering equipment and accessories and their installation should be completed within six months. It is stated by the Licensee that meters are available for 400 KV and 220 KV level. It is also stated that metering of 11 KV banks and feeders is now completed.
2. It is necessary to reduce the transmission loss by systematic action. From the consultants study made available to Commission by KPTCL, the loss up to 33 KV is around 10% which, is very high. The figures furnished by KPTCL in the tariff filing are much higher. The loss up to 33 KV should be reduced to 5 to 6% by strengthening the transmission system. The Licensee shall submit to the Commission a time bound action plan. This plan is to be submitted within four months from the date of this order.
3. The distribution loss of 11 KV and below which is around 20% of total availability is very high. It indicates about 30% of the energy reaching the distribution level is lost in technical and non-technical losses. The studies by reputed consultants got carried out by the Commission, have indicated existence of high non-technical losses, which is made up of theft, pilferage

and Commercial losses. The Licensee shall submit an action plan for phased reduction of distribution loss.

4. KPTCL shall create responsibility centers for energy audit. A subdivision or a division shall be a responsibility center. Metering should be done to measure the energy received in the responsibility center and account with respect to sales, etc. Officers who achieve good results in curbing theft, reduction of technical losses, should be rewarded.
5. The Commission has already issued detailed directions for energy audit action plan and direction to reduce the distribution loss of 46 towns and cities of over 50,000 population to a maximum 15%. The Licensee shall take action as per the directions already issued.
6. The Licensee shall reduce the number of DC & MNR installations and they shall not exceed 1.5% of the metered installations in any Division. There shall be no MNR installations in industrial power installations (HT & LT) and commercial installations.
7. The Commission directs that the licensee shall achieve a T&D loss reduction to a level of 30% by 2000-01 & reduce the technical losses by 2% and non-technical losses by 5.5%.
8. A survey of unauthorized IP sets should be taken with in 3 months and all such IP sets should be disconnected with in this period. The licensee shall give wide publicity to the Commission's directions of not to tolerate any unauthorized installations and shall gear up administrative and vigilance machinery for vigorous action for disconnection of all unauthorized installations both in urban and rural areas. Stringent actions as per provisions of Electricity Supply Regulations for unauthorized abstraction of power should be taken. The Licensee shall file monthly progress reports to the Commission in this matter.
9. There is an imperative necessity to compute the IP set consumption on more rational and scientific basis. The Licensee shall review the existing procedure and submit a procedure to make the system more scientific, representative and to take care of the difference in consumption pattern of bore well, open well, riverbed IP sets etc. A survey of IP sets in the state with classification such as bore well IP sets, open well IP sets etc. along with capacity of pump set shall be undertaken by KPTCL and results of such a study made available to Commission within three months from the date of this order.

Annex 7

Distribution Transformer Failure

On a review of the distribution transformer failure for the year 99-2000, it is found that various capacities of transformers from 25 to 500 KVA numbering 26,921 have failed out of 139170 Nos. existing as on 31.3.2000. The cost of the failed transformers amounts to 104.81 crores. Though some of those transformers are repaired for reuse or some amount can be realized by selling the transformer as scrap, there is a substantial revenue loss to KPTCL. There is the added cost of removal and replacement of faulty transformer and also power supply interruption to the consumer till the transformer is replaced which may extend up to a week or more. If it is a transformer feeding IP Sets and there are standing crops or the transformer is feeding a water supply installation, the inconvenience and loss could be enormous. Large number of failed transformers accumulated infront of every section and sub-division office of KPTCL occupy a lot of space and present an ugly appearance.

Poor quality of transformers purchased, non enforcement of quality checks during manufacture and acceptance tests, or poor quality of distribution line maintenance, absence of protection on the secondary side of transformer and poor maintenance of transformer may be some of the reasons.

The failure is not uniform over the divisions and the failure rate between the Urban divisions varies from 3.40% at Additional South Division to 15% at Mysore city division and among Rural divisions it varies from 14.5% at Chikkodi division to 31.01% at C.R.Patna Division.

Better maintenance of transformer and distribution lines, proper maintenance of the transformer grounds, lighting arresters etc. can reduce the failure rate substantially.

KPTCL should systematize the transformer and line maintenance. The O & M section/sub division are the responsibility centers for this work. The work is of routine nature and well known to the O & M sections but never done properly since there is no reward or threat of punishment.

The Commission suggests to KPTCL to formulate a incentive scheme for good performance in the area of transformer failure reduction. All Urban sub divisions with percentage loss less than 5% and all Rural sub-division percentage loss less than 12% should be suitably recognized and cash award may be given for respective section/subdivisions. KPTCL should also take action on Officials/officers who disregard this work leading to higher failure.