<u>**TABLES**</u>

ANNEXURES

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BEFORE THE HON'BLE GUJARAT ELECTRICITY REGULATORY COMMISSION AT AHMEDABAD

CASE NO. 19 OF 1999

Date: 10th October, 2000

CORAM

JUSTICE (Rtd) D.G. KARIA, Chairman

SHRI B.M. OZA , Member

SHRI R.K. SHARMA , Member

ORDER

1. Introduction

1.1 The Gujarat Electricity Board (GEB), a duly constituted State Electricity Board under section 5 of the Electricity (Supply) Act 1948, has submitted its cost and revenue data for the purpose of determination of electricity tariff in Gujarat under its letter No. OM:COM:IPP: 6064 dated 15th September, 1999. The revision of electricity tariff is sought to be made under the provisions of section 29 of the Electricity Regulatory Commissions Act 1998, hereinafter referred to as ERC Act. The Gujarat Electricity Board is a vertically integrated utility catering the electricity needs of Gujarat (except area of A.E. Co., Ahmedabad and S.E.Co., Surat) by generating, transmitting and supplying the electricity.

1.2 Before the Commission deals with the cost and revenue data and details furnished by GEB for the purpose of revision of electricity tariff, it would be expedient to refer to several relevant provisions of ERC Act 1998. The Act is to provide among other things for the establishment of State Electricity Regulatory Commissions to function and discharge duties regarding rationalization of electricity tariff, transparent policies of subsidies, promotion of efficient and environmentally benign policies and for matters connected therewith or incidental thereto. The Gujarat Electricity Regulatory Commission has been constituted under section 17 (1) of the ERC Act to discharge the said duties and perform functions under section 22 of the Act. Section 29 of the Act contemplates determination of tariff by the State Commission. It reads as under:

“ 29. Determination of tariff by the State Commission

(1) Notwithstanding anything contained in any other law, the tariff for intra State transmission of electricity and the tariff for supply of electricity, grid, wholesale, bulk or retail, as the case may be, in a State(hereinafter referred as the “ tariff”), shall be subject to the provisions of this Act and the tariff shall be determined by the State Commission of that State in accordance with the provisions of this Act.

(2) The State Commission shall determine by regulations the terms and conditions for the fixation of tariff, and in doing so, shall be guided by the following namely.

(a) the principles and their applications provided in Secs.46,57 and 57 A 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 Sec. 59 of The Electricity (Supply) Act, 1948(54 of 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, optimum investments, and other matters which the State Commission considers appropriate for the purpose of this Act;

(e) The interests 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 power plans formulated by the Central Government.

(3) The State Commission, while determining the tariff under this Act shall not show undue preference to any consumer of electricity, but may differentiate according to the consumers' load factor, power factor, 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 supply and the purpose for which the supply is required.

(4) The holder of each license and other persons including the Board or its successor body authorized to transmit sell, distribute or supply electricity wholesale, bulk or retail, in the State shall observe the methodologies and procedures specified by the State Commission from time to time in calculating the expected revenue from charges which he is permitted to recover and in determining tariffs to collect those revenues.

(5) If the State Government requires to grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission under this section, 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 condition for the licensees or any other person concerned to implement the subsidy provided for by the State Government.

(6) Notwithstanding anything contained in Secs. 57-A and 57-B of the Electricity (Supply) Act 1948(54 of 1948) no rating committee shall be constituted after the date of commencement of this Act and the Commission shall secure that the licensees comply with the provisions of their license and for the sale of electricity both wholesale and retail and for connections and use of their assets or systems in accordance with the provisions of this Act.”

1.3 By the aforesaid proposal of GEB dated 15th September, 1999, the details and data of the cost and revenue of GEB were neither adequate nor up to date. The Commission therefore called for better and further particulars by providing necessary formats under its letter dated 22nd October 1999 followed by several requests and reminders as stated below:

1. GERC’s letter No. GERC-99/MF/595 dot. 3/11/99 and letter No. GERC-99/MF/771 dated 30/12/99 regarding fuel cost adjustment.

2. GERC’s letter No. GERC-99/MF/594 dt. 2/11/99 and letter NO. GERC-99/MF/770 dt. 30/12/99 regarding computation of energy consumption by agriculture sector.

3. GERC’s letter No. GERC-99/MF/756 dt. 28/12/99 regarding captive power plant.

4. GERC’s letter No. GERC-99 MF/577 dt. 28/12/99 regarding bulk power purchase, IPP/sanction holder/ central sector.

5. GERC’s letter No. GERC-9/MF/785 dt. 4-1-2000.

6. GERC's letter No. GERC-99/MF/769 dt. 30-12-99 regarding GEB's system T& D losses.

7. GERC's D.O.Letter No. GERC-99/MF/593 dt. 3-11-1999 to Member(F) regarding submission proposed rates of tariff and comments i.e. technical and financial projections for the future.

8. GERC's letter No. GERC-2000/MF/909 dt. 1st February, 2000 regarding issues arising from analysis of data submitted by GEB for the year 1999-2000.

9. GERC's letter No. GERC-2000/MF/938 dt. 3/2/2000 regarding issues arising from the analysis of data submitted by GEB (estimate for revenue) for the year 1999-2000.

10. GERC's letter No. GERC-2000/MF/999 dt. 15/2/2000 regarding rate for agricultural consumers.

11. GERC's letter No. GERC-2000/MF/1003 dt 16/2/2000 regarding issues arising from analysis of data submitted by GEB for the year 1999-2000.

12. GERC's letter No. GERC-2000/MF/1085 dt. 25/2/2000 regarding additional points arising from analysis of data submitted by GEB for the year 1999-2000.

13. GERC's letter No. GERC-2000/MF/1086 dt 25/2/2000 regarding tariff for agricultural purposes.

14. GERC's letter No. GERC/MF2000/1398 dt. 1/6/2000 regarding issues arising from the analysis of data submitted by GEB for the year 2000-2001.

1.4 In response to the aforesaid letters, raising queries and seeking clarifications from GEB, the GEB furnished the revised data and details in respect of cost and revenue on 4th December, 1999, followed by further revised cost and revenue data on 27th February, 2000. Thereafter, when the hearings on the application were closed, the GEB wrote to the Commission on the 5th April, 2000 that since the year 1999-2000 was already over, it would like the Commission to consider the estimated increase in cost during the year 2000-2001. The Commission informed the GEB on 5th April, 2000 that in case the Board desires that any increase in the costs during the coming year should be taken into consideration while determining the tariff, then the cost and revenue data in the appropriate formats will have to be filed for the year 2000-2001. The Commission also asked the GEB to modify the data for the year 1999-2000 appropriately to reflect the actuals of that year. The GEB wrote to the Commission on 18th May,2000 furnishing details for the year 2000-2001.

1.5 In this application dated 18th May, 2000 the Board requested the Commission to treat the filing as a continuation on the same subject, i.e. the case No. 19/99. The request was being made as there was no substantive change in the majority of issues. The Commission agrees with this view and while dealing with this matter the Commission has considered the data furnished by the GEB on 18th May, 2000 to be in continuation of their petition under case No. 19 of 1999. The issues and submissions have therefore been taken as the same except as the modified in the later petition, furnishing estimated costs and revenue for the year 2000-2001.

1.6 GEB has sought for approval of additional revenue required to cover the expenses and the 3% return for the year 2000-20001. Further seeking to determine the tariff to recover its revenue requirements. The application broadly covers:

(i) The past tariff revisions.

(ii) Analysis of the cost data for the year 1998-99, 1999-2000 and 2000-2001.

(iii) Analysis of revenue data for the year 1998-99, 1999-2000 and 2000-2001.

(iv) Deficit for the year 1999-2000 and 2000-2001 based on the present existing tariff.

1.7 The deficit projected by the Board in their estimates for the year 2000-01 were further modified in the course of hearing on July 1, 2000, when GEB made a statement stating that they plan to effect savings of Rs. 860 crores by various measures as mentioned in its break-up in writing, submitted before the Commission on July 1, 2000, details of which are referred to herein below. The Government decided to adjust the subsidy payable against the outstanding loans from GEB, resulting in the saving of Rs.195 crores by way of interest payable to Government. In addition to this GEB stated that they had decided to defer their claim for depreciation and return on net fixed assets prescribed under the Act to the tune of Rs.783 Crores. All these measures resulted in the reduction of revenue requirement to the extent of Rs.1838 Crores, leaving the deficit of Rs.1445 Crores. On August 10, 2000 the State Government informed the Commission that a further saving of Rs.300 crores can be achieved by the Board. On August 25, 2000 GEB wrote to the Commission confirming the savings and reducing the deficit to Rs.1145 crores.

1.8 As stated hereinabove, the applications at various stages were lacking certain information and data and the Commission took time in examining and analyzing the data , till the clarifications were received from GEB.

1.9 It is not in dispute that, the tariff in Gujarat has not been revised periodically to meet fully the increase in input costs due to inflation, increase in cost of power etc. The tariffs that were revised from 1992 onwards are detailed below:

Table 1.9
Revision of Tariff

Category	Date of revision
All categories drawing power at low tension	January 23, 1992
All categories drawing power at high tension	May 21, 1993
Agricultural	June 1, 1993
LT and HT industries, Licensees and Railway traction	October 22, 1996
Agricultural (downward revision)	June 27, 1997

1.10 It is manifest from the above, that the tariff for the categories drawing power at low tension have not been revised for the last 8 years i.e. since 1992, and the tariff of HT and LT Industrial consumers for the last 4 years since 1996. Thus while the tariff for LT and HT consumers have not been revised the tariff for agricultural consumers was even reduced in June, 1997. The increase in variable cost by way of fuel cost adjustment charge, however came to be recovered from all the consumers except agricultural consumers based on the increase in fuel costs and also the increase in cost of purchase of power from various sources. However, it is not clear from the application as to what extent the recovery by way of fuel cost adjustment did meet the fuel cost increase, nor it is transparent. The Commission has dealt with the issue of fuel cost adjustment charge at length hereinafter.

1.11 It may be mentioned at this stage, that in exercise of the powers under section 26 of ERC Act, the Commission authorized Shri Darshan M. Parikh, Advocate of Gujarat High Court to represent the interests of the consumers in the proceedings that were conducted before the Commission in finalizing the present tariff proposal of GEB. The Commission is happy to record that the assistance rendered by Shri Parikh, to safeguard interest of the consumers is noteworthy and appreciable.

1.12 It is pertinent to note that GEB in its application for revenue requirements has not proposed any tariff rates for different categories of the consumers so as to enable GEB to raise the additional revenue to be mobilized through tariff. The GEB requested the Commission to determine the rates to recover and realize the additional revenue to the tune of Rs. 1145 crore without proposing any rates from their side. This is an important lacuna, which makes the application incomplete and renders it to be summarily rejected on this ground alone. The Commission took up this matter with the Board but of no avail. Having regard to the peculiar circumstances, particularly that the GEB's electricity tariff was not revised for last seven years, the Commission proceeded further to examine and analyse the GEB's application.

1.13 It has been argued before the Commission that the application of the GEB should be summarily rejected in view of the lacuna mentioned in para 1.12 above. It was also argued that since the GEB has failed to furnish the required information to the consumers, they had no opportunity to present their views in an effective manner and that the action of the GEB has been violative of the transparency in determination of tariff. The Commission has considered all these arguments very carefully. While it is true that the proposed tariff rates should have been given by the Board, it can not be gainsaid that the application of GEB must fail on that count alone. The Commission has to do substantial and equitable justice. The Commission will of course take corrective action to remove any doubt on this issue. It was also felt that the proposal should not be unduly delayed as a result of the controversy. The Commission therefore decided to go ahead with the proposal as if it is a special case. **The Commission would like to reiterate that in future, it would be incumbent upon GEB or any licensee to state specifically the proposed rates. The proposals of GEB for additional revenue as analyzed and dealt with should not be considered and quoted as a precedent.**

1.14 Similarly the Commission also carefully examined the argument about the GEB not furnishing the information to the consumers. The Commission is of the view that this has to be considered in its proper perspective. It may be appreciated that this was the first occasion when the GEB was required to give requisite data regarding its operations to the Commission and also to the consumers at large. The information, data and details to be so submitted pertain to various points and issues. GEB has finalized the Accounts for the year 1998-99, but the same are yet pending for auditing. In the circumstances, the Accounts for the said year can not be said to be unready nor can they be considered pending finalisation. It is therefore difficult to accept the submission that the application of GEB should be turned down on this count alone.

1.15 In order to ascertain the views of various consumer groups about the quality of service as well as the conditions of supply and the tariff, the Commission discussed this matter in the Advisory Committee of the Commission and also conducted the Consumers' Contact Programme. These measures were in addition to the public hearings which were held later. Brief details of these measures are given below.

1.16 The Commission, in exercise of the powers conferred under Section 24 of the Electricity Regulatory Commissions Act, 1998, constituted a State Level Advisory Committee consisting of sixteen members. The Commission selected these members from various fields so as to see that the interest of the various consumers in the field of commerce, industry, transport, agriculture, labour, consumer organizations, non-government organizations and academic and research bodies, in the energy sector, are protected. Besides sixteen members, the Chairperson and other two Members of the Commission are the members of the State Advisory Committee.

1.17 The first meeting of the Advisory Committee of the Commission was convened on 25th October 1999, and the members were apprised about the constitution of the duties and functions of the Commission. The second meeting of the Advisory Committee of the Commission was convened on 19th February 2000 in the Commission's office, and various issues relating to determination of tariff in connection with the application for revision of tariff by GEB, were discussed and deliberated. Important and relevant suggestions were made by the members of the Advisory Committee of the Commission in regard to power purchase, its utility, and the issues connecting to the generation, transmission and distribution of electricity supply, and transmission and distribution losses were discussed and deliberated. Again, such meeting was convened on 26th June 2000, wherein the members of the Advisory Committee of the Commission participated, discussing and dealing with the proposal of GEB in regard to determination of tariff. Suffice is to state at this stage that the Commission has taken all the relevant and important suggestions and recommendations of the Hon. Members of the Advisory Committee in determination of tariff.

1.18 This Commission also undertook the Consumers Contact Programmes by visiting various places in Gujarat and to know the real difficulties and inconveniences faced by the consumers in various fields of consumers, such as domestic, commercial, agriculture, industries, etc. Accordingly, the Chairman and the Members of the Commission visited Mehsana on 10th December 1999 and held a meeting with consumers at Mansinh Institute of Training hall in Mehsana, and had discussions and deliberations with several agriculturists and farmers. Such consumers from the agricultural field made grievances that electricity tariff was high and that they had to consume much electricity to extract water from a far greater depth, unlike the farmers of South Gujarat. Members of the Commission also visited Bharuch and Vapi on 14th and 15th December 1999, respectively, and contacted the consumers from various industries as well as the domestic and agricultural consumers. Likewise, the Commission undertook Consumers Contact Programme at Gandhidham and Bhuj on 23rd December 1999 during 10.00 AM to 12.00 Noon and in the afternoon during 3.00 PM to 5.00 PM on the same day. Similarly, on 27.12.1999 and also on 29.1.2000, the Commission visited Rajkot to have contacts with the consumers to know the difficulties and grievances of the consumers. The Commission has taken note of all such representations and requests of the consumers as gathered during the course of the aforesaid Consumers Contact Programme.

1.19 The Commission having completed the scrutiny and analysis of GEB's proposal, issued public notices in the press inviting objections and suggestions from the individuals, consumer groups, consumer associations and all such other concerned. This process was followed once again in respect of the data for the year 2000-2001 which was furnished by GEB after the hearings in respect of the petition were concluded and a second advertisement was got published in the newspapers. When the revenue requirement was further revised by the Board on 1-7-2000 as well as on 25-8-2000, it was decided to hold further hearing to give an opportunity to the consumers to express their views. The names of the newspapers, wherein such public notices were issued by the Commission on the dates showing against each newspaper are as under:

Table 1.19

Publication of advertisement by the Commission

Name of the Newspaper	**The first advertisement published on**	**Extension of time given in the first advertisement published on**	**Second advertisement published on**	**Third Advertisement published on**
The Times of India	30/1/2000	19/2/2000	9/6/2000	24.9.2000
Economic Times	31/1/2000	19/2/2000	9/6/2000	25.9.2000
Indian Express	30/1/2000	19/2/2000	9/6/2000	24.9.2000
Gujarat Samachar	31/1/2000		11/6/2000	25.9.2000
Sandesh	31/1/2000	18/2/2000	10/6/2000	24.9.2000
Sambhav	31/1/2000	19/2/2000	9/6/2000	23.9.2000
Jansatta	31/1/2000	19/2/2000	9/6/2000	24.9.2000
Phoolchhab	31/1/2000	19/2/2000	9/6/2000	24.9.2000
Kutchchh Mitra	31/1/2000	19/2/2000	9/6/2000	24.9.2000

1.20 The aforesaid first public notice invited the objections and suggestions of the concerned consumers , group of consumers etc by 15th February, 2000. The

Commission, however, received numerous complaints to the effect that, the time for filing the objections and suggestions in respect of the GEB's tariff proposal was short and seeking extension of such time. The Commission, accordingly, extended the time for filing the objections and suggestions till 29th February, 2000. The second public notice invited the objections and suggestions on the additional data for the year 2000-01 by 23rd June, 2000. The documents containing requisite relevant data and details filed by GEB, before the Commission was made available to the consumers who were desirous to get copies of such documents, on payment of nominal charges. The consumers and groups of consumers were invited to file their objections and suggestions on the proposal of GEB in writing and to state whether they intended to be heard in person. The third public notice on 23rd September, 2000 requested the consumers to give their views on the reduction of revenue requirement proposed by the GEB.

1.21 By the first public notice that appeared in aforesaid newspapers, except Gujarat Samachar, on or about 4th March, 2000, and subsequently on 9th and 10th June 2000, the Commission invited the concerned parties and the consumers for public hearings which commenced before the Commission on 8th March, 2000 onwards. After the second and third public notices the hearings were held on 1st July 2000 and 4th October, 2000 respectively. The Commission also separately informed all those individuals and organizations who raised the objections or made suggestions before the Commission as listed hereinabove.

1.22 It may be mentioned at this stage that on conclusion of the hearing by the Commission on July 1, 2000, the Commission was on the verge of finalizing the tariff order, the Commission received various requests and representations at that time, seeking further hearing in the matter, as the statement showing saving of Rs. 860 crores by various measures was submitted by GEB only during the course of hearing on July 1, 2000 and that there was thus no time and opportunity to study the said savings etc. Meanwhile, the Government of Gujarat under its letter dated August 10, 2000 communicated to the Commission that there is further scope to reduce the projected deficit approximately to the tune of Rs. 300 crores for the year 2000-2001. The GEB also submitted its application on August 28, 2000 reiterating that they will strive to achieve the saving of Rs. 300 crores, as indicated by the Government of Gujarat. In the changed circumstances and developments, the Commission could not finalize the tariff order and has to issue a public notice inviting suggestions/ objections from all the interested parties on the proposed reduction of deficit by the GEB and the Government. Accordingly, an advertisement was published in various newspapers on September 23,24 &25, 2000 as shown in aforesaid table No. 1.20. The Commission, accordingly, held the hearing of the GEB, concerned consumers and other concerned on October 4, 2000 in the Circuit House Annexe, Shahibaugh, Ahmedabad. The submissions made during the course of the said hearing are dealt with hereinunder.

2. <u>GEB's Proposal</u>

2.1 The proposal for determination of tariff was submitted by the GEB alongwith cost and revenue data at four different stages :

(a) The first proposal was given in September, 1999 alongwith the cost and revenue data for the year 1999-2000. After receipt of this proposal the Commission prescribed some filing requirements and sought additional details which were given by the Board in December, 1999 and February, 2000.

(b) After the hearings were held on the above proposal, the Board sent another proposal in May, 2000 stating that the cost and revenue data for the year 2000-01 should also be taken into account while determining tariff. The data for this year was also furnished by the Board on 18.5.2000. The Commission by its letter dated June 1, 2000 communicated to the GEB that the details submitted by GEB had been examined by the Commission and found that GEB adopted different methods, in matter of projection, as compared to the details of 1999-2000. Therefore, the Commission made a detailed list of issues and observation and called for GEB's clarification and explanations.

(c) When the hearing was being held in July, 2000 on the basis of the second proposal, the Board came up with a statement mentioning that they have decided to affect economies on various fronts and that they have decided to defer their claim in respect of depreciation and return on net fixed assets. This further reduced the revenue requirement of the Board.

(d) On 10th August, 2000 The Govt. Of Gujarat wrote to the Commission that as a result of review at Government's level, the deficit can be reduced further by achieving savings in fuel cost, cost of generation, T&D losses and by reduction of the rate of interest payable by the Board to Government. The savings on these account was estimated as Rs.300 crores. In their application dated 25th August, 2000 the Board also confirmed that they will strive to achieve the savings reducing the deficit further by Rs.300 crores.

2.2 In the course of this order, while the Commission may make reference and use the data in respect of the year 1999-2000, the order is basically in respect of and on the basis of the cost and revenue data for the year 2000-01 alongwith the Board's statement of 1st July, 2000 and application dated 25th August, 2000 reducing the revenue requirement.

2.3 While submitting the second proposal alongwith the cost and revenue data for the year 2000-01 the Board had mentioned that it should be treated as continuation of the earlier proposal for the year 1999-2000. The Commission has accepted this contention since all the submissions made in the earlier application continued to be valid. This will therefore, be dealt with in the subsequent paragraphs.

2.4 For the year 2000-01 the Board projected the total energy requirement of 40084 MUs with the projected T&D losses of 21%. This energy requirement was proposed to be met to the extent of 21898 MUs by GEB generation, 8168 MUs by purchase of power from Central Generating Stations, 9548 MUs from the IPPs, 250 Mus from CPPs, 209.08 MUs from sanction holders and 10 Mus from non-conventional sources. While the average cost of generation of the GEB worked out to be Rs. 2.12 per kwh, the average cost of power purchases from all sources worked out to be Rs. 2.92 per kwh.

2.5 In their proposals given to the Commission, the Board mentioned about the tariff revision undertaken in the past since 1992 and mentioned that no tariff revision has been affected by GEB since October 1996. It was also mentioned that for agricultural consumers there was a downward revision with effect from 1st April, 1997. The Board also brought to the notice of the Commission that the process of tariff revision being a partial exercise in the past, resulted into increasing levels of cross subsidy between different categories of consumers. Liberalized policy for setting up captive power plants coupled with high cross subsidizing industrial tariff have resulted in a distinct trend towards captive power generation by industrial consumers.

2.6 The Gujarat Electricity Board brought to the notice of the Commission in their submission of May 2000 that only 3.8% increase in the total sale was envisaged by GEB for the year 2000-2001. The forecast was based on the assumption that there will be no growth in the consumption of electricity by the industries in Gujarat during the year 2000-2001. It was also mentioned that transmission and distribution loss is estimated to account for about 21% of the net generation and power purchase during the year. Since the sale of energy to agricultural consumers, which was about 40% of the total sale were not metered, but assessed on the basis of theoretical calculation, the GEB stated that the loss represented only very approximate figures of the actual situation. GEB mentioned that, in these circumstances, the recommendations of the Mishra Committee report on system loss had been considered in the cost data. For the year 1999-2000, GEB proposed to reduce the system loss by about 1% and hence an estimate of 21% has been estimated in the cost data for that year given to the Commission in September 1999. However for the year 2000-01, the same loss level was maintained at 21% , as if no more or further efforts are to be made by GEB for reduction of the system loss.

2.7 On the basis of these details, the GEB estimated their cost for the year 2000-2001 as follows:

Table 2.7

Total Cost for the year 2000-2001

Sr.No.	**Particulars**	**Rs. In Crores**
1.	GEB generation cost*	4643.53
2.	Power Purchase cost	5209.92
3.	Transmission cost*	667.26
4.	Distribution HT cost*	387.52
5.	Distribution LT cost*	775.05
	Total cost including return	11683.28

*includes 3% return on net fixed assets

2.8 It is indicated in the proposal that the total cost inclusive of 3% return on the net fixed assets was expected to increase by 20.19% for the year 1999-2000 over the previous year. The cost for the year 2000-2001 increased by 20.46% even over the estimates of the year 1999-2000. A major portion of the increase was due to higher power purchase cost from outside sources like Central Sector and the IPP stations. The schedule 29 of the provisional accounts of GEB compiled for the year 1998-99 shows that the GEB had net outstanding dues of Rs. 2718.19 crores from the Government of Gujarat. The outstanding of the year 1999-2000 had not been assessed yet as the accounts were still under preparation. This amount would be added to the estimate of total outstanding from the Government for the year 2000-2001.

2.9 Analyzing the cost of supply at different voltages, it is mentioned in the proposal that the cost of supply, on the assumption of total T&D loss of 21%, will vary as follows:

Table 2.9
Cost of supply of GEB at different levels

Rs. Per Kwh

Year	Generator Bus Bar	Transmission EHT	Distribution HT	Distribution LT	Total
1998-99	1.84	2.18	2.50	3.12	2.86
1999-00	2.08	2.43347	2.77	3.40	3.14
2000-01	2.46	2.87	3.26	3.97	3.69

It is manifest from above that the total cost of supply, according to the estimates furnished by GEB was slated to increase by 9.79% and 17.5% in the year 1999-2000 and the year 2000-2001 over the previous years. It is also seen that the cost at generator busbar during these years have gone up by 13.04% and 18.26% respectively. The cost of generation and power purchase during these years has therefore increased more than the other costs.

2.10 As regards the revenue, the GEB calculated the revenue on the basis of the existing tariff structure and after adjusting the same against the total expenditure, projected the deficit for a particular year. The revenue, expenditure and deficit as seen from the provisional accounts for the year 1998-99 and those estimated by the GEB in their present proposals can be summarised as follows:

Table 2.10

Deficit during the last three years

(Rs. in crore)

Year	Revenue	Subsidy	Revenue & Subsidy	Expenditure	Deficit (-) or Surplus (+)
1998-99	5945.17	2092.88	8038.05	7911.60	(+) 126.45
1999-00	6428	1435	7863	9698	(-) 1835
2000-01	7140.5	1260	8400.5	11683.3	(-) 3282.8

2.11 The above table No. 2.10 makes it clear that between the year 1998-99 and the year 2000-01, while the revenue is expected to grow by 20.10%, the expenditure during the same period was estimated to grow by 47.68%, resulting in the deficit of Rs. 3282.8 crores. Another reason for large deficit for the year 2000-01 is the reduction in subsidy from the Government, which went down by 39.77%. The deficit of Rs.3282.8 crores was the revenue requirement projected by the GEB, for which the suitable revision in tariff has been sought for.

2.12 In addition to these details relating to cost and revenue, the GEB has highlighted certain important issues concerning electricity industry in Gujarat in their proposal.. These are as follows:

A. Distortion between sale and revenue.

Presenting sale and revenue analysis for the year 2000-2001, GEB mentioned that while 46% electricity was sold to agricultural use, the revenue from them was only to the extent of 4%. Similarly, while 22% electricity was sold to HT industries, income from them was 47%.

B. T& D loss.

GEB mentioned that in view of the higher proportion of agricultural sales, which were un-metered, the figures for loss were very approximate and represented only the technical loss in the system.

C. Tariff structure

The proposal stressed the need for rationalizing the tariff structure, as the existing structure had resulted in the increase in the capacity of captive power plants from 422 M.W in 1995-96 to 2043 M.W in 1998-99. It was also pointed out that while agricultural consumption accounts for 46% of the total consumption, its total contribution to the revenue was only 4% as the consumption is not metered and a flat HP based tariff is levied, there is no incentive for the consumer for conservation and optimum use.

D. Simplification of tariff structure.

The existing tariff structure had a large number of sub-categories and billing determinants, which had evolved over the years due to various reasons.

E. Mismatch between fixed cost and recovery through demand charges.

While the fixed cost were approximately 46% of the total cost, the revenue through demand charges was only 18% of the total revenue.

F. Fuel cost adjustment charges.

The existing formula for this charges for fuel cost was based on a historical base year rather than on shifting year basis It was desirable to re-design the formula appropriately having regard to rate of fuel and other incidental costs, relating thereto.

G. Structure of electricity duty.

It is mentioned in the proposal that the duty in the State ranged from 5% in respect of pumping water for irrigation purpose to 60% for consumption for commercial use. The details of prevailing electricity duty are also given .

2.13 Presentation in the course of hearing. The case for GEB was presented on behalf of the Board on 8th March, 2000. Opening the case, Shri M.M. Srivastava, Member (Finance), GEB thanked the Commission for giving an opportunity for presenting further data in support of GEB's earlier application. He welcomed the constitution of Gujarat Electricity Regulatory Commission and various steps initiated by the Commission for organizing consumers contact programme. Shri Srivastava stated about the GEB proposal, in brief, as aforesaid.

2.14 Thereafter, Shri A.J. Buch, Additional Chief Engineer (Commerce), GEB presented the historical background of the Board right from its inception in 1961. He explained the details regarding installed capacity, number of consumers served, towns and villages electrified , sales and per capita consumption of electricity. He also gave the details regarding various generating stations of the GEB at various locations in Gujarat. GEB has the power stations operating on coal, lignite, gas and oil. There are also a few hydro power stations. He also mentioned that the plants generating power at Ukai, Gandhinagar and Dhuvaran were very old and required extensive renovation and modernization. He mentioned that the quality of fuel was a serious problem for GEB. However, Ukai, Wanakbori, Dhuvaran, Panandhro, Gandhinagar and Sikka power stations have got efficiency awards on several occasions from the Central Electricity Authority for best performance in various areas. He also mentioned that, GEB had initiated steps to improve the performance of generating stations by modernization, joint sampling of coal with the Coal lndia and also now the use of imported coal. He also highlighted various other actions under process to improve the plant load factor at Wanakbori, Gandinagar, Ukai, Sikka, Panadhro and Dhuvaran power stations. He mentioned that the hydro power generation was very limited compared to total generation of GEB. However, to utilize the potential of Kadana hydro power station, construction of weir will be completed by December, 2000 which will facilitate re-utilisation of water for power generation.

2.15 Thereafter, Shri H.A.Shah, Member (Technical), GEB, gave details regarding transmission activities of the Board. He mentioned that GEB was having voltage of transmission system from 33 KV to 400 KV. It had 649 sub-stations with 28,333 circuit kilo meters of transmission lines and 31,104 MVA transformer capacity of various voltages. The transmission availability was comparatively high of the level of 99.96%(400 kV), 97.10%(220 KV), 96.20%(132 KV) and 93.10%(66 KV) during the year 1999. He mentioned that, the GEB had taken steps for adding capacitors for improving the voltage of the system. Up to November, 1999, GEB had installed capacitors of the total capacity of 2520

MVAR. He also mentioned that the voltage condition on maximum and minimum load were reasonable within the permissible limit except at far end areas of the state i.e. Saurashtra and Kutch. He also mentioned that during the recent cyclone in Saurashtra, GEB had played a vital role in restoring the power supply in the shortest time. This effort involved considerable cost to GEB.

2.16 As regards the distribution system, Shri Shah submitted that GEB had distribution system of various voltages of 22 KV, 11 KV, 440 Volts and 230 Volts with 5,799 circuit kilo meters of 22 KV lines, 1,23,562 circuit kilo meters of 11 KV lines, 1,82,769 circuit kilo meters of LT lines and 1,72,662 numbers of transformers at the end of the year 1998-99. He also mentioned that because of HP based tariff for agricultural consumption, it was very difficult to calculate the T& D losses of the system. However, the Mishra Committee appointed by the Government had suggested some norms for calculation of T&D losses and energy consumption in agricultural sector. He mentioned that, as suggested by this committee, the GEB had installed meters on approximately 50% transformer centers by December, 1999 and will be completed by December, 2000. GEB was facing great difficulty in installing meters in view of the consumers' resistance. Shri Shah stated that the T& D losses in GEB system were estimated at 21% during the year 1999-2000. However, GEB proposed to reduce these losses by replacing the meters, modernizing the billing practice, providing quality meters and introduction of computerized billing. GEB had initiated the intensive checking of the consumers' installations, providing metal meter boxes for curbing theft of energy. In addition to these, the system improvement schemes like bifurcation of long rural feeders and installations of capacitors banks had also been initiated. Seven point action plan for selected 36 urban feeders which reported high T& D losses was also initiated. The demand side management activity had also been introduced by GEB to improve efficiency.

2.17 Thereafter, the financial and cost data of the GEB was presented by Member (Finance) Shri M.M. Srivastava. He stated that, as compared to the year 1998-99, there was an expected increase of 11.3% in the cost of GEB's generation, 37.5% in power purchase, 11.5% in transmission and 15.2% in distribution. The over all cost increase was thus 20.9%. To minimize the cost of power, GEB was trying to achieve the optimum generation form its own plants and enforced merit order purchase from the Central Sector and IPPs. He mentioned that increase in generation cost is due to increase in transportation cost, fuel cost and also the employee cost due to revision of pay. The position was compounded by the poor rain fall leading to reduced potential of hydro generation. He mentioned that, during the year 1999-2000, GEB's generation was 55% and that from IPPs was 45%. He also mentioned that the average cost of supply is Rs. 2.86 per unit for the year 1998-99 and Rs. 3.14 per unit for the year 1999-2000. He also dealt with the total cost and revenue and mentioned that the net deficit was RS. 1835 crore. Shri Srivastava mentioned that GEB has further submitted the comparative status of total O&M costs, number of employees per million unit sold, number of employees for 1000 consumers, primary fuel consumption of surrounding states like Madya Pradesh, Maharashtra and Rajasthan and the all India average. He further explained the current financial position and stressed the necessity for appropriate tariff increase to meet with the cost of various schemes for improvement in the performance of GEB. He also dealt with the position of the past tariff revision and stated that the current tariff structure was characterized by high cross subsidy, low demand charges, large number of tariff slabs, number of tariff elements in HT tariff and un-metered agricultural tariff.

2.18 Shri Srivastava thereafter mentioned a number of steps which were being taken by the Board for better and faster services. These were Zonal and Local Advisory Committees, constitution of new Zonal Offices at Baroda and Bhavangar, authorizing Circle Offices to release HT connections upto 275 KVA, improved cheque payment scheme, improved bill collection system, spot billing facility, introducing advance payment scheme and finally the Citizens Chapter which was proposed to be formed by the Board which will define the duties and responsibilities of the Board as well as rights and duties of the consumers.

He mentioned that, the Board was taking all steps to improve the performance and efficiency for fast services to consumers by way of transparent administration and efficient services. In the end, he requested the Commission to determine an appropriate tariff for the Board, after taking into account the entire case and data presented by the Board.

2.19 **Statement of GEB on 1st July 2000.** As mentioned in para 2.1 above, the GEB submitted further data on the cost and revenue for the year 2000-2001. The Commission issued public notice making these details available to consumers, invited objections and suggestions on the new data and held hearing on 1st July 2000. On the commencement of the hearing, Shri M.M.Srivastava, Member (F) of the Board made a statement indicating the reduction in the revenue requirement projected by the Board for the year 2000-01. **Annexure-A** shows the statement made by the Board.

2.20 It was mentioned in the statement that after taking into account the suggestions made by the Commission in their letter dated 25th April 2000 as well as various objections raised by the consumers a number of meetings were initiated under the chairmanship of the Finance Minister. On the basis of the decisions taken in these meetings, the Board made following submissions in the Statement:

A. Reduction in Costs

(a) Employee cost. It was decided to reduce the employee costs by Rs. 50 Crores.

(b) Fuel cost. (coal). Due to 15% blending of imported coal with the indigenous coal, rationalization of coal linkage, joint sampling etc. reduction in the cost of coal will be to the tune of Rs. 250 Crores.

(c) Fuel cost (Naptha) Naptha price was expected to stabilize in the current year and therefore reduction in the cost of Naptha to the tune of Rs. 50 Crore is possible.

B. Improvement of Performance

(a) **Plant Load Factor.** GEB intends to increase the plant load factor by 1% during the current year. The 1% increase in PLF shall result into cutting of cost by Rs. 50 Crores.

(b) **Theft of Power and Recovery of Dues.** The checking drives shall be intensified and integrated efforts shall be made in coordination with other related departments like civil supplies, sales tax, income tax, excise etc. and areas prone to maximum theft shall be identified so as to enhance realization by about Rs.80 crores during the current year. Similarly due to recoveries of outstanding dues as a result of special drive, the deficit will be reduced by Rs. 100 crores during the current year.

(c) **Agricultural consumption & T&D Losses.** GEB will take measures to reduce T&D losses by 1% during the current year. This, coupled with good monsoon which will result in the reduced agricultural consumption and consequently reduced purchase of power will result into reduction of an estimated amount of Rs. 280 crores against the costs of GEB.

C. Financing Measures

(a) Outstanding subsidy receivable from State Government. The Government of Gujarat has decided to adjust the outstanding claim of the Board in respect of subsidy against the outstanding loans in descending order of interest charges. This action shall reduce the deficit by an estimated amount of around Rs. 195 crores by way of reduction in the cost of interest payable to Govt. of Gujarat for the year 2000-01.

(b) **ROR and Depreciation.** Keeping in view the representations of consumers to optimize the deficit, the GEB has decided to defer the claims to future on account of ROR and depreciation to the tune of Rs. 783 Crores.

2.21 **Revised Deficit.** Total reduction as a result of above submissions worked out to Rs.1838 crores, leaving the deficit and hence the projected revenue requirement to Rs. 1445 crores as against the earlier projected figure of Rs.3282.8 crores.

2.22 **Letter dt.10-8-2000 from the Govt. of Gujarat.** The above deficit projected in para 2.22 was further revised when the Commission received a letter from the Principal Secretary, Government of Gujarat in Energy and Petrochemicals Department. Annexure-B shows the letter received from the Government. The letter stated that after the GEB revised their deficit to Rs. 1445 crores, the matter was further discussed at various levels in the State Government and it was felt that there was scope for reduction in the deficit. The working of this reduction was shown as follows:

Sr.No.	**Head of Account**	**Estimated Reduction of Deficit (Rs. In crore)**
1.	Naptha cost reduction due to taxation / imports	60
2.	Further reduction in T&D losses	70
3.	Reduction in Heat rate/Auxiliary consumption and saving in cost of generation	40
4.	Fuel cost saving	20
5.	Saving of interest payable to State Govt. on reduction of interest rates against outstanding Government Loans	110
	TOTAL	**300**

2.23 **GEB's application dated 25th August, 2000.** On receipt of the above letter from the Government, the Commission took the view that since the original application for determination of tariff came from the GEB, any change to the revenue requirement has to be proposed by GEB only. Accordingly the Commission wrote back to the Government on 12th August, 2000 requesting them to direct the GEB to write to the Commission and also to indicate the working of the savings achieved. In response to this GEB sent an application dated 25-8-2000 confirming the savings of Rs.300 crores indicated by the State Government and assuring their best efforts to achieve the same.

2.24 **Final Deficit.** Taking into account the further savings of Rs. 300 crores indicated by the Government of Gujarat and also confirmed by the GEB, the final deficit and therefore the projected revenue requirement will now work out to Rs. 1145 crores, as against the originally projected figure of Rs.3282.8 crores.

3. Objections raised during the hearing.

3.1 As mentioned earlier, the Commission circulated on three occasions public notices inviting objections and suggestions. In response to the aforesaid public notices, which appeared in the press, the Commission received suggestions and objections from as many as 73 consumers and consumers' organizations. The individuals and the organizations, who raised their objections or made suggestions in reply to the proposals of GEB for revising the tariff are listed as under:

Table 3.1

List of organizations and individuals who sent objections/suggestions

Sr.No	Name and Place
1.	Federation of Gujarat Industries, Baroda*
2.	Central Gujarat Chamber of Commerce, Vadodara
3.	Gujarat Paper Makers Association, Ahmedabad.
4.	IEE Power Engineers Society (India Council)*, **
5.	Western Railway, Church Gate, Bombay (Traction Loads)

6.	Western Railway, Church Gate, Bombay (Non-traction Load)
7.	Chloro Alkali Association, Ahmedabad
8.	Gujarat Stainless Steel Rollers Association, Ahmedabad **
9.	HGI Industries Limited, Panchmahal, Tal. Halol
10.	Panchmahal Steels Limited, Vadodara.
11.	Garg Cast Steel Limited, Bhavangar.
12.	Vapi Industrial Association, Vapi
13	Maradia Chemicals Limited, Ahmedabad **
14.	Center for Apparent Energy Research , Vithal Udyognagar, Anand Nagar.∗, **
15.	R. N. Shaw, Baorda,.
16.	Western Railway Kamdhar Sangh, Gandhidham. **
17.	All India Induction Furnace Association, Ahmedabad ∗
18.	J R.F. Vadodara.
19.	High Tension Consumers Association, Rajkot.
20	GEB Engineers Association, Gandhinagar. **
21	M Kamaluddin JKCF Baruch.
22	Institute of Indian Foundry Men, Vadodara.
23.	J.V Heat Treaters, Rajkot
24	R.M. Sanghani Jilla Garden Road, Rajkot.
25.	Prof. Sinha,, IIM, Ahmedabad.
26.	Sri Bhuj Grahak Suraksha Mandal, Bhuj
27.	Federation of Industries Association **
28.	Bhavangar Chemical Manufacturers Association, Bhavangar.
29.	Bhavangar District Small Industries Association, Bhavanagar ∗
30.	Vadodara Chamber of Commerce & Industry
31.	Rajkot Engineering Association, Rajkot
32.	Federation of Panchmahal Industries, Godhra
33.	Bhavnagar Plastic Manufacturers Association, Bhavnagar.
34.	Hotel Surya, Baroda
35.	Shri Sanat Mehta, Former Finance Minister of Gujarat&.Fomer M.P **

36	The Institute of Indian Foundry men, Rajkot Chapter
37.	The Institute of Indian Foundrymen, Ahmedabad
38.	Shri C.P. Mehta, Bhuj.
39.	Mr. Janak M Banjara, Ahmedabad
40.	Consumer Education & Research Society, Ahmedabad. *, **
41.	Gujarat Chambers of Commerce and Industry. *
42.	Confederation of Indian Indian Industry
43.	Vitthal Udyognagar Industries Association
44.	Baroda Chapter of Cost Accounts **
45.	Jhagadia Industries Association.
46.	Centricast Enterprises Pvt Ltd, Ahmedabad
47.	Gray Cast Foundry Works, Ahmedabad
48.	Reclamation Welding Limited
49.	AIA Magotteaus Limited
50.	HQ Commander Works Engineers, Baroda
51.	Bhagawati Auto Cast Limited
52.	Hotel Surya (Dandayal Hotels Pvt Limited)
53.	All India Induction Furnaces Association, Gujarat Regional Branch, Ahmedabad *
54.	Kothi Steels Limited, Chikhodra, Godhra, Panchmahal District
55.	Shefali Steels Limited, Santej, Mehsana Distirct
56.	Shah Alloys Limited, Ashram Road, Ahmedabad
57.	Mangalam Alloys Limited, Navrangpura, Ahmedabad
58.	Loshana Steel Pvt Limited, Pratapnagar, Baroda.
59.	Chandan Steel Limited, Tank Road, Mumbai
60.	Gujarat Alkalies and Chemicals Limited, Bharuch
61.	Jamnagar Factory Owners Association
62.	Ankaleshwar Industries Association
63.	Farmers of North Gujarat and Kutch Area.
64	The Ahmedabad Electricity Company Ltd. *, **

65	The Surat Electricity Company Ltd. *
66	General Manager, Telecom Dist., Vadodara
67	Shri S.C. Buch, Vadodara **
68	Shri K.C. Patel, Ahmedabad **
69	Surat Municipal Corporation, Surat **
70	M/s. Viraj Synthetics Pvt Ltd. *
71	Surat Power-loom Cloth Marketing Co-op. Society Ltd.
72	Vadodara Municipal Corporation, Baroda **
73	The Ahmedabad Municipal Corporation, Ahmedabad **

* This organisation / individual sent his comments on the cost and revenue data for the year 2000- 01 also. Some of them personally presented their case in the hearing on 1st July, 2000.

** Indicates the parties who remained present at the time of hearing on 4.10.2000

The Commission examined and studied the objections and suggestions as received aforesaid. Some of the objections are of general in nature, whereas, some are specific to the proposals submitted by GEB for tariff revision. The objections are by and large repetitive in nature. We therefore do not feel it proper to refer to each of such objection and suggestion in detail and it would be expedient to group such objections in several categories having regard to the nature and character of the objections raised by the individuals or organizations. The objections as have been raised and suggestions as have been received from various consumers and organizations have been summarized in the succeeding paragraphs, topic wise.

3.2 Admissibility of Petition

3.2.1 The Consumers Research Education Society (CERS) opposed the admission of the petition of the GEB for revision of tariff on the ground that GEB must demonstrate that it has organized its work relating to transmission and distribution of the electricity supply in the most efficient and economical manner as mentioned in S.18 of Electricity (Supply) Act,1948.. If it does not do so it has no right to ask for revision of tariff. The CERS also opposed the petition on the ground that GEB had not indicated the quantum of increase required by them in the present tariff. Their opposition was also on the ground that some of the details lacking in GEB's submission are essential to understand the basis of the accounting principles. In their absence, it cannot be said that the requirement of transparency has been met. The CERS stated that on this ground the GEB's request for an increase in the tariff deserves to be rejected.

3.3.2 Surendranagar Small Industries Association as well as Southern Gujarat Chamber of Commerce & Industry have opposed the admission of the petition on the ground that the figures as submitted by the GEB are simply estimates. On the basis of such estimated figures it envisages a huge tariff hike in one year. It also urged that the applications may be dismissed for want of proper accounts, figures supplied being incoherent and largely at variance. It further maintained that GEB's application dtd. 18th May, 2000 should not be taken in continuation of their application of 15th September, 1999.

3.4 Accounts of GEB

3.4.1 Several points regarding accounts of the GEB were raised by Surendranagar Small Industries Association, Southern Gujarat Chamber of Commerce & Industry, Federation of Gujarat Industries as well as Gujarat Chamber of Commerce & Industries. These organizations maintained that the accounts of GEB for the year 1998-99 are not complete and accounts for the year 1999-2000 have not even been compiled till this date. As such no accounts and details are made available for these periods and hypothetical expectations have been expressed. They also mentioned that the audited accounts for the year 1998-99 with notes and remarks of the Auditors must be produced before the Commission prior to moving in the matter.

3.4.2 It was also mentioned in these objections that the depreciation on various assets is increasing although assets have not increased substantially. Another objection raised was about recognition of the loss of Rs. 1835 crores pertaining to previous year. Bhavnagar Small Industries Association, Mardia Chemicals, Vapi Industrial Association and several other consumer organizations maintained that no evidence has been produced to recognize this loss and the present accounts are wrong and misleading. Till the correct accounts are presented the previous year's loss should not be recognized.

3.4.3 Consumer Education Research Society made a suggestion that the Commission should direct the GEB to get its accounts scrutinized by an independent Cost Accountant so that it can be assured that the allocation and accumulation of cost has been done in a correct and transparent basis.

3.5 Performance related issues

3.5.1 **Operational efficiency**

A number of important suggestions were made by various consumer organizations like Consumer Research Education Society, IEE Power Engineering Society, Federation of Gujarat Industries and others. They maintained that efficiency of GEB's functioning should be improved in respect of all operational matters. They also maintained that the power purchase should be strictly on merit order basis since the cost of power in case of some of the IPPs was very high. They observed that the Plant Load Factor of some of the power stations of GEB is quite low. The Gujarat Chamber of Commerce and Industries maintained that the Commission should frame a policy for purchase of surplus power generated from CPP by the industries at a very cheap rate of Re 1/- to Rs. 3/-. This would not only enable the industries of Gujarat to operate with reasonable rates of electricity but would also enable the GEB to get power at a lower cost.

3.5.2 Economy in expenditure

The Vapi Industrial Association, Bhavnagar Chemical Manufacturers Association, Bhavnagar District Small Industries Association, IEE Power Engineering Society and Federation of Gujarat Industries maintained that there was a need for utmost economy in the expenditure of GEB. They maintained that the expenditure on salaries, wages and administrative cost should be optimized. Stringent economy measures should be taken and wasteful expenditure should be curtailed. Claims for coal shortages, grade slippages and railway freight raised with Coal India/Railway, but not accepted, should not be passed on to the consumers. Norm should be fixed for repairs and maintenance charges for each plant. It was also mentioned that the GEB is borrowing funds at very high rates of interest and it should discharge the debts by borrowing funds at low interest rate available at present. If the GEB recovers its receivables of Rs. 4475 crores on the sale of power, subsidies and sundries, then there would be considerable saving of interest charges. The objectors also wanted that the Commission should direct the Board to place before them the measures taken and sought to be taken by the Board to cut down the cost.

3.5.3 Metering

Several consumer organizations maintained that all agricultural services should be metered and proper energy audit/accounting should be undertaken by the GEB as all the energy supply is not metered in the agricultural area. Some consumers also made suggestion that the GEB should formulate programme to replace the defective meters. They also maintained that the GEB should purchase quality and tamper proof meters and draw a time bound programme to replace the defective meters.

3.5.4 T&D losses

The consumer groups maintained that the reported T&D losses are not correct as the agricultural consumption is on assessed basis and the agricultural supply is not metered. They also maintained that the T&D losses of 21% or 20% adopted by GEB are too high and it should be reduced to optimum level. They also maintained that the GEB has not chalked out any programme to reduce technical and non-technical losses. According to them, the losses must be brought down to atleast 19%. The Vapi Industries Association suggested that the GEB should initiate detailed study with a time bound programme to reduce the losses.

3.5.5 Theft of Power

All the consumer groups stressed the need to take stringent steps to curb power theft. It was stated by them that the non-technical losses had a large proportion of power theft. The Gujarat Stainless Steel Rollers Association made a suggestion that those who provide information regarding power pilferage should be given incentive by GEB and their identity should be kept confidential.

3.6 Tariff structure

3.6.1 Several suggestions were made regarding the tariff structure. They are largely related to allocating the charges on various consumer groups, agricultural tariff, additional charges, rebates and fuel cost adjustment and several issues relating to customer services. The consumer groups also took up the matters relating to electricity duty, tax and subsidy and several other policy issues ranging from National Fuel Policy to Power Purchase Agreements and restructuring of GEB. Certain special tariff was also requested by certain groups pleading the case for their own group of consumers. All these suggestions have been summarized in the following paragraphs.

3.6.2 General suggestions

The consumer groups generally maintained that the cross subsidy should be avoided and the tariff should be nearer to the cost of supply. They maintained that the tariff structure should be rationalized and made simple. They also suggested that the power tariff may be classified according to voltage level and incentive may be provided to encourage energy conservation. The Industries' Organizations maintained that the existing tariff for HT Industry is too high due to cross subsidization and needs to be reduced. They also maintained that the present restriction on lighting consumption under HT tariff should be deleted for simplification and to avoid separate metering. It was also suggested that the tariff for domestic, commercial, LT and HT industries should not be revised.

3.6.3 Agriculture tariff.

Several organizations suggested that subsidy given to agriculture or any sector has to be fully borne by the Government of Gujarat. They suggested that tariff should be fixed in such a way that no category of consumer pays less than 50% of the average cost of supply. They suggested that the tariff for agricultural consumers should not be less than the variable cost i.e., the fuel cost. The agricultural power may not be supplied during peak hours thereby reducing the necessity of purchasing this costly power. The farmers of North Gujarat who appeared before the commission in the course of hearing suggested that the agricultural tariff per HP should be uniform for all the pumps irrespective of the size of pumps. They advocated the continuance of the HP based tariff to avoid harassment of consumers on account of non-working of meters and corrupt practices of the meter readers. They suggested that even if the meters were to be installed, billing should be continued on HP basis. The representatives of Bhartiya Kisan Sangh, who appeared before the Commission in the hearing dated 4-10-2000 stressed the need to give special treatment to farmers, who had to face the vagaries of weather and who had no say in determining the price of their own produce. Shri Laxmanbhai Patodia, speaking for the Sangh mentioned that looking at the colossal cost of importing foodgrains, the contribution of farmers to the country's economy was significant. Dealing with the high consumption of electricity for agriculture, he mentioned about a special double chamber pump developed by Shri Budhabhai Jadeja in Bhuj, which can reduce the consumption to one third as compared to the normal pump. He requested the Commission to commend this pump to Government, so that appropriate steps can be taken to make it available to farmers and the electricity can be saved.

3.6.4 Additional charges, rebate and fuel cost adjustment (FCA)

A number of consumer organizations made suggestion for rationalization of tariff. They maintained that the additional charges such as TOU (Time of Use) charges, additional maximum demand charges, surcharge etc. should be avoided. Delayed payment charges should not be levied. Atleast the present delayed payment charges should be reduced. Everyone unanimously requested for an attractive tariff for night consumption and maintained that power factor rebate should be continued beyond initial period of two years. A number of consumer groups maintained that a new formula for FCA should be submitted by GEB, consumers should get an opportunity to express their views on it and then it should be decided in a transparent manner. Till the GEB submits such a formula no formula should be approved. They also suggested that fuel cost adjustment charges should cover only fuel related cost and no other cost should be included.

3.7 Special tariff for certain groups

3.7.1 Railway Traction

Tariff for H.T supply to railway traction should be lower and one part type based on cost to serve at EHV. Railways traction operation is uneconomical with the existing high electricity tariff and is not competitive with the diesel traction. Due to high cost of power Railways may have to switch over to diesel traction. Alternatively the tariff should be based on cost of power purchased from Central generation stations plus wheeling charges and reasonable profit. Railways should be compensated for power supply interruption and poor voltage.

3.7.2 Defence and Railway Colonies.

Special tariff to be fixed for defence and railway colonies. Till the time such tariff is fixed, GEB may bill the occupants individually as per the rate applicable to GEB's consumers.

3.7.3 HTP IV tariff.

The tariff HPT-IV earlier fixed for steel industry using induction furnace may be continued and further reduced as the units in Gujarat are not compatible at GEB's standard rate. Foundries using induction furnace have also requested to extend tariff HTV-IV for their consumption. The tariff discrimination between units using induction furnace and arc furnace should be removed.

3.7.4 Maradia Chemicals and Chloro Alkali Association of Gujarat

They have requested for concessional rate of Rs. 2.22 per unit In view of the uneconomical operation of their units.

3.7.5 **LTP III tariff.**

Annealing process units, need standby furnace. Some industries need standby motors and have high diversity in their operation. Tariff LTP-3 based on maximum demand instead of connected load as it was existing in past may be provided for L.T. Industries.

3.7.6 Tariff for hotels.

Industrial tariff may be applied to hotels, treating hotel industry as any other industry.

3.8 Issues relating to Customer Services and Conditions of Supply

3.8.1 A number of organizations including the Chambers of Commerce of Industry focused on the consumer related issues. They maintained that the quality of supply should be uniform and power supply should be continuous and free of interruption. Many other issues raised by them were adequate facilities for payment of bills, early release of agricultural connections, simplifying the bill format and paying interest on security deposits.

3.8.2 The other important issues raised were the date of presentation of cheque. Presently if a cheque is paid by the consumer, only the date of realization is taken as date of payment. This some times results in the consumer paying of the penalty for late payment. It was requested that as a normal commercial practice the date of presentation of cheque should be taken as date of payment.

3.8.3 Many organizations represented that GEB is insisting for payment of security deposit as per the latest rates whenever the customer requests for increase or reduction in contract demand. This procedure should be changed. It was requested that development charges should not be collected when the consumer requests for additional demand.

3.8.4 The next important suggestion was on facility for checking meters. Many organizations represented that checking facility should be available with the local staff to avoid penalties at a later date. They also mentioned that it is the responsibility of GEB to maintain meters in good condition and in case the defective meter is detected higher electricity charges should not be recovered with retrospective effect from the consumer.

3.8.5 The Gujarat Chamber of Commerce and Industries also requested that the Commission should frame a policy for release of power and increase or decrease in power load. Moreover, a fixed time schedule of releasing power or changing the power supply, within sixty days from the date of request of the consumer will go a long way in the planned development of industries and thereby saving the industries of Gujarat from a very huge losses. They also requested that circulars of GEB should be sent to various Chambers, Associations etc.

3.9 Issues relating to electricity duty, tax and subsidy

3.9.1 Several suggestions were made for simplification and rationalization of electricity duty and tax on the sale of electricity duty. Suggestions were also made on the subsidy payable by Government.

3.9.2 It was observed by most of the organizations that electricity duty in Gujarat is very high compared to other states and it should be reduced. It was also stated that the electricity duty should be charged on unit basis instead of on *ad-veloram* basis. Duties for various categories of consumption also need to be rationalized. The IEE Power Engineering Society also demanded that the sums collected towards electricity duty and tax on sale of electricity should be shown by the GEB in their data. Tax on sale of electricity should not be charged on electricity consumption.

3.9.3 As regards subsidy it was suggested that the Government should fully pay the subsidy to be given to any sector as per the Government policy. The burden should not be passed on to other categories of consumers through cross subsidy. It was also suggested that in lieu of Board’s dues on account of subsidy from Government, interest burden on loans given by the Government should be waived.

3.10 Other Policy Issues

3.10.1 Other policy issues raised by the consumers in the course of their submissions before the Commission particularly relate to high fuel cost, the policy regarding purchase of power and restructuring of power sector in the State.

3.10.2 It was submitted that National Fuel Policy should be evolved to allocate local fuel like natural gas to Gujarat. This will avoid cross transportation cost at present incurred on transportation of coal from long distance coal fields to Gujarat and natural gas from Gujarat to other states. National Fuel Policy may embark upon rationalization of coal cost and railway freight so that delivered cost of coal at all thermal stations in India are uniform. It was also suggested that high grade quality of coal should be procured to reduce incidence of railway freight. Suggestion was also made that GEB should import high grade coal which is cheaper than the delivered cost of Indian coal. The consumers exhorted that Gujarat should work out alternate fuel policy.

3.10.3 The next set of suggestions were in respect of Power Purchase Agreements observing that the power purchase cost was shooting up very high. The consumers suggested that the GEB should not enter into any new agreements for purchase of power with naphtha based generation which is very costly. New power plants should be based on lignite which is locally available. It was also suggested that all the PPAs which have so far been entered by the Board should be reviewed and reopened to reduce the power cost and no incentive should be paid to IPPs in Gujarat.

3.10.4 A suggestion about restructuring envisages that Gujarat may be divided into manageable distribution zones to be entrusted to competent agency. The distribution management of large cities having population of more than 5.00 lakhs should also be given to private agencies. The consumer Education research Society also suggested that the Commission should recommend to the Government separation of generation, distribution and transmission of power and forming separate independent companies for this purpose. They mentioned that this will have the advantage of assessing the efficiency of these activities independently so that inefficiency of one activity is not masked in other activity.

3.11 Submission by the learned Counsel appointed to look after the interests of consumers.

3.11.1 In addition to the above organizations and consumers who raised objections and made various suggestions, Shri D.M. Parikh, the counsel appointed by the

Commission under section 26 of ERC Act, 1998 to look after the interests of the consumers also made his submissions after various objectors had closed their case. Shri Parikh mentioned that certain important provisions of the law should be kept in view while deciding the case submitted by the Board. These were sections 18 and 18-A of the Electricity Supply Act 1948 dealing with the general duties of the Board as well as the duties of the generating companies, section 22 of the Electricity Regulatory Commissions Act 1998 specifying the functions of the Commission, section 22 (2)(j) of the ERC Act 1998 dealing with the power of the Commission to advise on the state power policy and section 29 of the ERC Act 1998 dealing with the determination of tariff by the Commission.

3.11.2 Shri Parikh further submitted that the application of the Board had not been appropriately made since it did not contain all the necessary and relevant data. He added that it was very essential for the Board to work efficiently and economically before coming to the Commission for increase in tariff. He mentioned that even in the details supplied by the Board there were instances of huge loss related to coal shortages. A sum of Rs. 75 crore relating to the year 1995-96 for such shortage was not recovered from the Coal India so far. Shri Parikh questioned as to why consumers should pay for this amount of inefficiency.

3.11.3 In support of his contentions, Shri Parikh read out large number of paragraphs from the report of Comptroller and Auditor General of India for the year 1997-98. The paragraphs contain instances of losses and inefficiency in various transactions of the Gujarat Electricity Board. Shri Parikh contended that, there were evidences to show that the Board had not carried out its business efficiently. Shri Parikh mentioned that the T& D losses in the Board were on higher side which was another indication to inefficient functioning. Shri Parikh stated that there was no metering of supply for agricultural consumers and the supply to them was heavily subsidized. He mentioned that according to the common minimum action plan for power, which was decided in the Chief Ministers' meeting in 1996, provided that tariff for agricultural sector will not be less than

50% per Kwh to be brought to 50% average cost in not more than 3 years. He mentioned that no action had been taken even on this decision. Shri Parikh referred to the suggestions given by Dr. Kamat regarding measurement of apparent energy to improve the efficient use of electricity and requested that the suggestions required consideration. Shri Parikh mentioned that any sector where more loss was incurred either due to technical reasons, but particularly due to tariff of power must be borne by that sector alone. He stated that the Board has not shown as to how they will reduce the losses and what they will do with the additional income. Shri Parikh also referred to the power purchase agreement stating that power supplied by IPPs was proving to be extremely costly. The terms offered to IPPs were more reasonable and the PPAs must be reconsidered. He also mentioned that power purchase should be restricted to minimum.

3.11.4 Later on, in written submission given in addition to discussing the cost and revenue data given by the Board, Shri Parikh also made the following suggestions.

1. GEB should increase PLF of their own generating stations.
2. Costlier power purchase from IPPs should be minimized.
3. To get more HT consumers load….. cross subsidy should be reduced.
4. To get good quality of coal or alternatively coal should be imported.
5. Installing meters on agricultural connections to know realistic agricultural consumption and consequent T& D losses.

4. GEB's replies to objections.

4.1 GEB submitted replies in respect of the objections and suggestions received by the Commission. The copies of the replies were also furnished by GEB to the concerned parties. The replies given by GEB were in general terms and particularly dealt with the objections raised by various persons rather than in response to the suggestions made. With regard to certain issues like subsidy, agricultural tariff, tariff structure, electricity duty, tax on sale of electricity and other policy issues raised by the consumers, GEB preferred to keep silence only replying that it was a matter of Government policy or it was for the Commission to decide appropriate tariff structure. The major points emerging from the replies given by the GEB in respect of the various objections and suggestions grouped in para 3 above can be summarized as follows :

4.2 Admissibility of petition

As regards the issues raised in respect of admissibility of petition, GEB stated that it has always been functioning in the most economic and efficient manner and has won several prizes declared by the Government of India for good performance. GEB also stated that it had submitted detailed estimates to the Commission and it has been the common regulatory practice in India to determine tariff on the basis of the estimates submitted by the utilities. They also submitted that the inconsistencies in the accounts pointed out by some consumers have been already explained by them and therefore, the Commission should go ahead with their application to determine the tariff. They also stated that the request to the Commission to recognize the loss of Rs. 1835 crores for the year 1999-2000 is based on the provisions of law and they would request the Commission to order accordingly.

4.3 Accounts of GEB

In response to the various objections raised in respect of the accounts, GEB stated that their annual accounts are compiled and prepared on the basis of accounts of individual field offices spread over the entire state and this process takes significant time. They also stated that these accounts are required to be audited by the Accountant General of the State and then submitted to the State Government and approved by the Legislative Assembly. The accounts for FY 1997-98 have been put up before the Legislative Assembly while the accounts for the year 1998-99 are currently under audit by the Accountant General. GEB also stated that the depreciation to various assets has been provided in accordance with the guidelines laid down by the Government of India. They reiterated that the request to recognizes the loss of Rs. 1835 crores in respect of the previous year has been made on the basis of the provisions of law.

4.4 Performance related issues

4.4.1 Operational efficiency

GEB stated that the explanation in the context of PLF has been provided at Appendix-4 of the filing of the Board dtd 15th September, 1999 and that made on February 27, 2000. It was stated that the Board has won several prizes declared by the Government of India for good performance and the Board always tried to work in the most efficient and economic manner. It was also stated that the Board continuously strives to ensure that proper quality and quantity of coal is received and whenever there is any difference, claims are made from the concerned organizations. GEB also mentioned that the cost of generation is high because of the high cost of fuel and transport of fuel. Korba and Vindhyachal project of NTPC are coal based pit head stations where fuel is available cheap and of high grade. There is no freight cost. Kawas is a gas based station using duel fuel viz. Gas and Naphtha and therefore, high PLF is achieved. The gas based station at Utran does not receive gas sufficient in quantity and at adequate pressure. Sikka TPS had long outages over some past period. The quality of Lignite for the KLTPS is very poor. On the other hand GEB's thermal stations at Gandhinagar, Sikka, Dhuvaran and Wanakbori have attained very high PLF and received the highest PLF award at more than one occasions. The auxiliary consumption is just equivalent to design parameters. Dealing with certain objections regarding Plant Load Factor at Wanakbori, GEB stated that Unit No. 2 of Wanakbori TPS was scheduled to undergo annual overhauling during the year 1999-2000. In view of the draught condition, the scheduled overhauling was deferred which contributed to more availability and more generation in 1999-2000. During the year 2000-01 all the units of Wanakbori TPS are to be taken out for capital/annual overhauling. The PLF, therefore, get reduced on this account. The availability of gas at Utran is drastically reduced which will cause reduced output from this station.

4.4.2 Economy in expenditure

(a) **Expenditure on Administration.** Dealing with the objections pertaining to economy in expenditure, GEB stated that it is trying to effect utmost economy on economic front in the administration at all levels. The surplus staff is being redeployed at the places of need, R&M activities mobilized for improving plant efficiency and purchasing the power to meet with the demand keeping in view the cost parameters. GEB also mentioned that the administration of staff strength is not high. In fact the overall staff strength in terms of per thousand consumers and other parameters, it is one of the lowest among the comparable utilities. Many of the posts of senior levels are being rationalized. New offices are being created at the field level to augment the staff which is being done generally through redeployment with a view to achieve economy.

(b) **Interest Charges.** As regards interest charges the Board mentioned that the GEB and State Government have recognized the concern of the esteemed consumers and the Hon'ble Commission decided to take specific action in this regard. It was also mentioned that the details furnished in the cost and revenue data do not incorporate the principal amount of the new bonds taken out by the Board in the value of Rs. 500 crores. Thus, the resultant rate of interest worked out higher at 21.74%. With the inclusion of principal amount of the new bonds the effective rate of interest shall be less than 14%, which is comparable with the prevailing interest rate in the open market. GEB stated that it has made concerted efforts to reduce the cost in all the areas.

4.4.3 Metering

GEB did not offer any comments on the metering of agricultural consumers. GEB, however, mentioned that it undertakes to change defective meters of industrial consumers on priority basis and there are hardly any pending cases at the end of each month. As far as domestic meters are concerned, the same are sufficiently sturdy and do not develop defects unless mishandled. GEB is also improving the quality of purchase of meters to reduce the compliance of defective meters. Mention must be made here of the statement made by Shri H.A. Shah, Member (Tech) of GEB contained in para 2.20 of this order, stating that GEB has decided to entrust the work of replacing the defective meters on turn key basis to another agency.

4.4.4 T&D losses and theft of power

GEB replied that it has initiated several steps to reduce the losses. The 1% reduction in T&D losses as projected by the Board for the year 1999-2000 was itself an ambitious target which the Board had sought for itself. This is so because of the following reasons :

(a) High loading of lines especially during peak hours results in higher system losses.

(b) Changing profile of sales from HT towards LT

(c) Implementation of system improvement schemes take time and the benefits are available only after a time gap.

The impact on losses of GEB budget is very well borne in mind. Moreover, new power stations are already planned in Kutchchh area, Jamnagar District, Amreli District and Bhavnagar District. All these actions will result into reduction of T&D losses. The Board added that for industrial and urban feeders the losses are calculated on actual basis and theoretical losses are calculated only for unmetered supplies of rural feeders. The transmission loss for inter-state transactions are approximately 5%.

4.4.5 Tariff Structure

GEB did not express any opinion on the various suggestions, but only requested the Commission to determine appropriate tariff.

4.4.6 Agricultural Tariff

The GEB maintained that they did not wish to comment on the issue of agricultural tariff and requested the Commission to determine appropriate tariff.

4.4.7 Additional charges, rebate and fuel cost adjustment

On the various aspects brought out in the suggestions, GEB gave the following replies:

(a) Delayed Payment Charges

The imposition of these charges is deterrent to the consumers for dissuading him defaulting of payment. GEB incurs expenses on purchase of fuel, purchase of power and thereafter bills for recovery of charges after a period of one month of consumption and allows grace period for making payment without attracting delayed payment charges. Thus, the rate of interest does not have any bearing on the Reserve Bank rates. The Board submitted that delayed payment charges are recovered from defaulting consumers only. GEB on its part is also obliged to pay interest to its various suppliers of commodity, fuel and electricity in the event of default.

(b) Fuel Cost Adjustment (FCA)

The FCA clause is implemented as per the current structure provided in the tariff schedule. The FCA varies according to the change in the fuel cost and power purchase cost which are not in the control of the

Board. Accordingly, GEB has not revised its tariff since October, 1996 as submitted in the petition. The Board has already requested the Commission to determine a revised FCA formula. Such a formula is necessary to take care of fluctuation in the cost of fuel which is beyond the control of the Board. As far as the validity of the imposition of FCA levy is concerned the Board mentioned that all the past tariff revisions of the Board upto 1993 were challenged by the Consumers of Forum in the High Court of Gujarat where the proposals were approved. It is also further submitted that for quite some time it was only the generation of power by the Board for which FCA recovery was necessary and for which a simpler formula could be adopted. Presently a mix of power supply is being received from various sources for which specific formula is necessary.

(c) Additional charges

The additional charges are a part of tariff structure as the full cost of supplying electricity is not recovered through the basic charges. The Board has already requested the Commission to determine a rational tariff structure.

(d) Tariff for night consumption

GEB’s tariff have inbuilt provision of concession to the industries for utilizing power during off-peak hours.

(e) Special tariff for certain groups

The Board has not expressed any opinion about the tariff requested for various groups. It only requested the Commission to determine appropriate tariff.

4.4.8 Issues relating to customer services

As regards customer services GEB replied as follows :

(a) Steps taken to improve the customer services

(i) Two new zones have been created for efficient administration at decentralized level

(ii) This has been achieved by redeployment of existing staff

(iii) Decentralization of powers has been effected for faster release of new connections.

(iv) Spot billing has been introduced.

(v) Citizens charter to be released soon

(vi) Fault center gangs in urban areas work round the clock

(vii) Radio trunking facilities have been provided to staff at Baroda and is being extended to other places.

(viii) Tower ladders have been provided at Baroda and other major cities

(ix) Lok adalats are being organized at various centers in the State regularly to finalise grievances and disputes of the consumers.

(x) Creation of Zonal Advisory Committee is being planned.

(b) Reduction of Load

GEB deals with the application of reduction of load within the shortest time possible provided the consumers comply with the basic requirements which include payment of outstanding arrears and withdrawal of litigation, if any.

(c) Payment by Cheques

The Board plans to introduce the scheme in the context of date of cheque and the orders will be issued soon.

(d) Faulty meters

The Board always strives to serve its consumers in the most efficient and economic manner. Meters installed at consumer premises are thoroughly checked prior to installations. Faulty meters at consumer ends are generally due to tampering and manhandling by the consumer. The local officer and inspector are the authority in such matters. All efforts are made to rectify the defective meters at the earliest. GEB is also improving the quality of purchase of meters to reduce the complaints of defective meters.

(e) Development Charges

It may be noted that to serve the additional load it is necessary to augment the system by providing appropriate infrastructure facilities. The development charges are levied to meet the cost of providing these facilities. The revenue from this forms a part of consumers' contribution and is accounted separately under the accounts of the Board

(f) Security Deposit

The amounts of security deposit recovered from the consumers so far were quite inadequate to protect against default of payment. In fact, that was the reason for the GEB to make an upward revision in respect of payment of security deposit. The amount is necessary to safeguard the interest of the Board. The Board is not required to make payment of interest on the same.

4.4.9 Issues relating to electricity duty, tax on subsidy

GEB stated that this is subject matter under jurisdiction of Government of Gujarat.

4.4.10 Other policy issues

GEB did not comment on the policy issues and various suggestions.

4.5 In addition to above, Shri H.B. Shah Learned counsel for the GEB also argued after the conclusion of the case on behalf of the objectors. Replying to the points raised by Shri Parikh, Shri Shah stated that it was not correct to say that the GEB was not functioning efficiently. He asserted that the working of the Board was being carried out efficiently. He presented the comparative statistic with regard to the Boards in other state to show that the GEB was working efficiently. He also mentioned that the Board had won several awards for efficient working. As regards to various observations in the report of C& AG mentioned by Shri Parikh,, Shri Shah stated that these observations will be replied by the Board and it is discussed in the Committee on Public Undertaking. He also argued that the Board had absolute powers to determine the conditions of supply and consequently to revise the security deposit. He requested the Commission to determine appropriate tariff, after taking into consideration all the facts.

5. Analysis of the Proposal

5.1 Projected sale of Electricity and total energy requirement.

GEB has adopted trend line projections technique, using categorywise energy sales for last 8 years, and growth rate so determined is used to project estimated sales for FY 2000-01. The cumulative aggregate gross rate for last eight years have also been calculated. The basis adopted and estimated energy sales for FY 2000-01 is tabulated below :

Table 5.1

Projected sale of electricity for the year 2000-01

Category	Basis	Growth rate (%)	Estimated energy sales for FY 2000-01 (MU)
Residential	Exponential trend line	11.0%	3162
Commercial	-do-	15.1%	929
Industries LT	Economic factors	0	2672
Industries HT	-do-	0	6821
Public lighting	CAGR	3.7%	123
Railways	-do-	4.2%	396
Agriculture	Exponential trend line	3.4%	14507
Water works	CAGR	9.2%	473
Licensees	CAGR	8.2%	2583
Overall		**3.8%**	**31666**

GEB stated that the industrial consumption has become stagnant, due to recessionary conditions faced by the industries and, therefore, no growth is anticipated in industrial sector. GEB has estimated the total energy sales of 31666 MU for FY 2000-2001. Considering 21% T&D losses, the total energy requirement is estimated as 40084 MU.

5.2 Evaluation of Sale Projections.

5.2.1 It will be seen from the table 5.1 above that during the year 2000-01 GEB has estimated an overall increase of 3.8% in the electrical energy requirement for electricity in the State. It is doubtful whether in the agricultural consumption the method of exponential trend alone will have any validity since the consumption is dependent upon a number of variables. However, the Commission has adopted a different basis for estimating this consumption and this has been discussed in para 5.3 below. As regards the industrial consumption, the GEB has estimated zero growth rate in both LT and HT industries. Looking at the trend of industrial consumption, we are of the view that over a short term period, it will be proper to accept the presumption of GEB for zero growth of industrial consumption.

5.2.2 Words of warning and alarm were voiced during hearing that due to excessive tariff in HT power to industries, no one will venture to have industry in Gujarat and that the existing industries are also likely to be wound up. However, we can not be oblivious of the fact that Gujarat is one of the pragmatic and progressive states. Gujarat has set up “Gujarat Infrastructure Development Board” under the Chairmanship of the Chief Minister. The Board aims to remove impediments in the implementation of fast tract infrastructure projects. Gujarat as a progressive state has formulated “Power Systems Master Plan” to have a comprehensive approach to create reliable, efficient and quality power. The Plan includes, short term and long term plans, net working, use of non-conventional energy sources, regulatory and legislative measures, incentives etc. Therefore, in overall scenario, and taking a medium term or long term view, we do not see much substance in doubts and dangers described by the consumers, particularly of the industrial sectors.

5.3 Agricultural consumption

5.3.1 In its statement on 1-7-2000 made in the course of hearing, the Board stated that the high consumption of power during the year 1999-2000 in the agricultural sector was mainly because of the drought conditions last year in Gujarat. They stated that monsoon during the current year can be expected to be normal and therefore, the consumption of electrical energy in the agricultural sector shall reduce. Accordingly, the revised assessment of the sale of power to the agriculture had been estimated by GEB at 13600 MUs. However, as is common knowledge by now, the rains have not been satisfactory even this year and therefore agricultural consumption may be high. The Commission, therefore is of the view that a normative approach needs to be developed to assess agricultural consumption, in the absence of meters.

5.3.2 The Board has already stated in their proposals submitted to the Commission that the entire consumption of agriculture is worked on the basis of estimation since most of the supply is unmetered. The matter was also discussed with the officials of the Board who mentioned that as there were no meters, the entire consumption on the rural feeders was taken as estimated consumption. This method of assessment of consumption, although prevalent till today, is not at all a satisfactory method to compute agricultural consumption. It is urged by a group of the consumers during hearing that the electricity energy used for the purpose other than agriculture and unauthorized use of the electricity, even by way of theft are being added and included as the agricultural consumption. There is no satisfactory reply by GEB in this regard. It is obvious and it is the firm opinion of the Commission that what can not be measured, can not be managed. It is, therefore, difficult to arrive at the exact figure of agriculture consumption in the State. However, the Commission has made its earnest efforts to have just and justifiable statistics of electrical use in agriculture area.

5.3.3 The norms for agricultural consumption have already been laid down by a Committee constituted by the Government of Gujarat called "Mishra Committee Report" dated March 23, 1999. This Committee was constituted to study the actual power consumption in agricultural sector based on 4000 odd meters already installed on agricultural transformer centers. It was envisaged that the consumption data/pattern obtained from meters already installed could be utilized to explore and determine the extent of agricultural consumption. The Committee after making its study of the consumption pattern available on the installed transformers came to the conclusion that based on their estimate of agricultural consumption, units consumed per year per KW of connected agricultural load ranged from 2200 to 2400 units. For the purpose of estimating agricultural consumption, the Commission decided to adopt the same norms as laid down by the Mishra Committee

5.3.4 The norms laid down by Mishra Committee, if adopted at an average consumption of as 2300 KWH/KW of connected load, will work out to 1700 KWH/HP. The connected load in the agricultural sector according to the figures furnished by the Board is 53,24,000 BHP for unmetered connections. If this load is multiplied by the norm of 1700 KWH/HP and the relatively small amount of metered consumption if 115 MUs is added to it, the estimated energy consumption would be 9165 MUs as against 13600 MUs (revised) estimated by the GEB. In view of the reasons stated above, the Commission decides to adopt the figure of 9165 MUs as agricultural consumption, which, in opinion of the Commission, is just and reasonable.

5.4 Sales projection accepted by GERC

As discussed in para 5.3 above the sale projections as accepted by GERC in respect of energy sales for the year 2000-01 work out to 26324 MUs as against GEB's estimate of 31666 MUs according to the details given below.

Table 5.4
Sales Projections approved by GERC

Category	Estimated energy sales for FY 2000-01 (MU)
Residential	3162
Commercial	929
Industries LT	2672
Industries HT	6821
Public lighting	123

Railways	396
Agriculture	9165
Water works	473
Licensees	2583
Overall	**26324**

5.5 T&D Losses

5.5.1 In their submission to the Commission, the Board had clearly mentioned that for the year 1999-2000 they would reduce the system loss by 1% and hence, they adopted the system loss of 21% for the year 2000-01. In the submission on 1st July, 2000, in the course of hearing, the Board stated that it would further reduce the loss by one more percent. This brings the loss to 20% during the year 2000-01. The impact of the revised loss has been taken care of while working out the revenue requirement.

5.5.2 However, the Board had also mentioned in its submission in September, 1999 that in view of the high proportion of agricultural sales, which is unmetered, the figures for loss were approximate and represent only the technical loss in the system. As the above analysis will show, as against the agricultural consumption of 14507 MUs adopted by the Board the energy consumption estimated on the basis of norms for agricultural purpose is only 9165 MUs. However, relying on the total energy sent out and metered by the Board, the total estimates for energy requirements remain at 40084 MUs. From this figure if the total consumption worked out by the Commission, i.e. 26324 MUs is subtracted, the balance figure is 13760 MU, which represents losses in the GEB system. In other words, with reference to total energy sent out, the loss in the GEB system works out to be 34.32% as against 21% or 20%, adopted by the GEB.

5.5.3 This level of the loss should be rated as quite high. While we are aware that in other parts of the country many utilities have declared losses of this order or more, we see no reason why they should be accepted. Unduly high losses throw additional burden on the consumers for which they are not responsible. GEB has also not stated how much of these losses are technical and how much of these losses are non-technical. However, if its statement in para 38 of the submission dated 15-9-99 is taken into account, the 21% losses as accounted for, represents only technical losses in the system. It, therefore, follows that the balance of losses i.e. about 13.32% represent as non-technical losses. The non-technical losses largely consist of unauthorized supply, theft of energy and loss of energy due to defective metering. All these factors are very well within the reach of the Board to set them right by suitable administrative measures. We are, therefore, of the firm view that the Board must tighten its machinery to reduce the non-technical element of loss. It would be reasonable to recommend to GEB to make all its efforts to control and eventually eliminate the losses. This has also been discussed subsequently in para 9 where we have given suitable directions.

5.5.4 However, for the year 2000-01 in view of the reasons stated above, we have decided to reckon the T&D losses of the system in GEB at the level of 30%. We, therefore, presume that the Board will take suitable measures to reduce the non-technical part of the losses atleast to the extent of 4.32% in the course of this year. The calculation of total energy requirement has been made by assuming the total T&D losses at the level of 30%.

5.6 Energy requirement

5.6.1 Considering the agricultural consumption estimated in para 5.2 above and the T&D losses of 30% as explained in para 5.4 above the total energy requirement as estimated by the GERC for the year 2000-01 works out as follows:

Table 5.6.1

Energy Requirement

Total Sales as approved by GERC	26324 MU
Loss of GEB system as approved by GERC @ 30%	11282 MU
Total	37606MU

5.6.2 In view of the changes considered by GERC in respect of Agricultural consumption and T&D losses on 30%, the total energy requirement, it works out to be 37606 MU against GEB's estimates of 40084 MU.

5.7 Generation in GEB's power stations

5.7.1 According to the projections made by GEB the generation in GEB's plants during the year 2000-01 is estimated as follows :

Table 5.7.1

Generation in GEB's plants

Name of the Plant	Installed Capacity (MW)	Auxiliary consumption	Expected PLF	Expected Energy sent out (MU)
Dhuvaran	588	9.60%	55.49%	2583.60
Wanakbori	1260	9.50%	74.56%	7448.20
Gandhinagar	660	10.20%	61.21%	3178.00
Ukai TPS	850	10.00%	64.32%	4310.10
Utran	135	4.80%	83.80%	943.40
Sikka	240	10.50%	59.36%	1117.00
KLTPS	215	12.50%	62.44%	1029.00
Ukai Hydro	305	0.90%	29.94%	792.80
Kadana Hydro	242	0.90%	23.59%	495.50
Total	**4495**			**21897.60**

5.7.2 That out of the total requirement of 37606 MUs, more than 50% viz., 21897 MUs is proposed to be generated by the GEB in its own plants. The balance of power will have to be purchased from the Central Sector power stations and Independent Power Producers including Captive Power Producers in accordance with the Merit order, set out herein below.

5.8 Plant Load Factor

5.8.1 It manifests from the details given above that there is adequate scope for improvement in the cost of the generation of GEB's plants. There are two factors which have bearing on the cost, (i) the auxiliary consumption and (ii) plant load factor. The auxiliary consumption is self consumption of the plant consumed by the auxiliaries in the plant which help to generate power. Having regard to the age of the plant and the nature of the plant the auxiliary consumption estimated by the GEB is generally in order. For the purpose of this Order, the auxiliary consumption as given by the GEB for its own plants has been accepted by the Commission.

5.8.2 The next important criteria is the Plant Load Factor. The Plant Load Factor indicates the proportion of plant capacity, which is being actually utilized to generate power. The balance of capacity still remains to be utilized and with that more power can be generated. The study reveals that the Plant Load Factor, as given by the Board, there is considerable scope of improvement. The Commission deliberated on this issue with the officials of the Board and came to the conclusion that the Plant Load Factor adopted by the GEB in certain cases were in the lower side and they can be effectively enhanced to achieve higher generation. The Plant Load Factor as proposed by the GEB and approved by the GERC for various plants is given below :

Table 5.8.2
Plant Load Factor and Expected Energy sent out by GEB Plants

Station	PLF proposed by GEB	PLF approved by GERC	Expected Energy sent out as per GERC
Dhuvaran	55.49	57.30	2667
Ukai	64.32	64.32	4310
Gandhinagar	61.21	61.21	3178
Wanakbori	74.56	76.00	7592
Sikka	59.36	59.36	1117

KLTPS	62.44	62.44	1029
Utran	83.80	85.00	956
Ukai Hydro	29.94	29.94	793
Kadana Hydro	23.59	23.59	495
TOTAL			**22137**

5.8.3 With the above improvement in the Plant Load Factor the total generation in GEB's plants will now be 22137 MUs as against 21897 originally estimated by GEB in the proposals. Consequently, it would curtail purchase of power from private producers and CPPs and the consumers will not be saddled with more liabilities.

5.9 **Power purchase**

5.9.1 The total energy requirement of the GEB considering the T&D losses of 30% has been assessed at 37606 MUs. As aforesaid. Para 5.7 above and improvement in the Plant Load Factor as directed by the GERC, do show that the GEB's generation will be 22137 MUs. This will leave a balance of 15469 MUs which will have to be procured from outside sources. The GEB purchases its power from Central Generating Stations, Independent Power Producers and also from the Captive Power Plants, Sanction Holders and Non-conventional sources like wind power. In the proposal, the GEB has estimated a purchase of 18186 MUs according to the requirement projected by GEB. These are proposed to be purchased as shown in table given below :

Table 5.9.1

Purchase of Power proposed by the GEB

Sl. No.	**Source**	**Capacity available to GEB (MW)**	**PLF (%)**	**Energy sent out (MUs)**	**Energy Purchase by GEB (MUs)**
NTPC					
1.	Korba	360	80.67	13,579	2,327.9
2.	Vindhyachal	230	80.47	8,127	1,483.6

3	Vindhyachal-II	119	68.50	2,700	642.7
4.	Kawas	184	83.13	4,559	1,299.7
5	Gandhar	234	38.48	2,150	765.2
6	ER Power	53	-	-	100
Subtotal		**1,180**			**6,619.0**
NUCLEAR POWER CORPORATION					
1.	Tarapur	160	66.59	1,756	833.07
2.	Kakrapar	125	73.67	2,485	716.066
Subtotal		285			1,549.14
IPPs					
1.	GIPCL	160	25.9	340	340
2.	Essar	300	28.59	730	730
3.	GTEC	655	85.0	4,736	4,736
4.	GSECL G'nagar.5	210	75.0	1,262	1,150
5.	GSECL WTPS-7	210	75.0	1,262	1,150
6.	GIPCL (M)	250	80.0	1,577	1,443
Subtotal		**1,758**			**9,549**
CAPTIVE POWER PLANTS					
1.	GACL				150
2.	RPL				100
Subtotal					**250**
SANCTION HOLDERS					
1.	GIPCL	145	75.0	287	209
NON-CONVENTIONAL					
1.	Wind-farm				10
TOTAL PURCHASE					**18,186**

5.9.2 It is seen that in the above purchase, GEB proposes to procure 6619 MUs from NTPC, 1549 MUs from the Nuclear Power Corporation, 9549 MUs from Independent Power Producers, 250 MUs from Captive Power Producers, 209 MUs from Sanction Holders and 10 MUs from the wind farm.

5.10 Merit Order Dispatch

The energy requirements proposed to be procured by the GEB from various sources were analysed by the Commission. In case of Central Stations, the GEB is entitled to purchase the allocated share of power from them. The corresponding percentage of fixed cost of these stations is required to be met by the GEB, irrespective of how much of power GEB avails. In case of IPPs there is Power Purchase Agreement with GEB and these are dedicated stations. In accordance with the agreements for power purchase in case of these stations the fixed cost is to be borne by the GEB irrespective of whether they avail the power from by these stations or otherwise. There is no such obligation in respect of the Captive Power Plants or other sources. Therefore, the comparison of the cost of power among these sources has to be done on the basis of the variable cost. The Commission would like that the GEB should minimize its cost of power. In order to achieve this, they must organize the purchase in such a manner that the maximum power is purchased form the cheapest source. The next requirement should be met from the next cheaper source and so on. This method is also known as Merit Order Dispatch. So far as the sources of the GEB purchases are concerned the merit order would work out as follows :

Table 5.10

Merit order of sources for purchase of power

Station	Variable Price (Rs/Kwh)		Merit Order
Korba	NTPC	0.70	1
Vindhyachal (II)	NTPC	0.78	2
Vindhyachal	NTPC	0.84	3
Tarapur	NPC	0.99	4
GIPCL(M)	IPP	1.00	5
Gandhar	NTPC	1.18	6
GIPCL (V)	SC	1.20	7
GSECL-WTPS-VII	IPP	1.38	8
GSECL-GNR-V	IPP	1.43	9

Kawas	NTPC	1.69	10
GTEC	IPP	2.58	12
Kakrapar	NPC	2.86	14
Essar	IPP	2.98	15
GIPCL	IPP	3.53	18

Note **: *In the event of change in variable costs, the power should be purchased from the source with the least variable cost and thereafter in that order.***

5.11 Power purchase from various sources

Enforcing the merit order worked out above, the GEB will be required to purchase different quantities of power from different sources as compared to what they had projected. After enforcing the Merit Order Dispatch as mentioned above and after consultation with the concerned officials of the GEB regarding quantum of power which can be procured from various plants, the Commission comes to the conclusion that the total quantity of 15469 MUs required to be purchased can be met from various sources as follows, having regard to the Merit Order Dispatch.

Table 5.11

Purchase of power in Merit order

Sr No	**Station**	**PLF**		**MUs purchases**	
		As proposed by GEB	**As taken by GERC**	**GEB**	**GERC**
(I) NTPC					
	Korba	80.67	82.00	2,327.9	2366
2	Vindhyachal (1)	80.47	85.00	1,483.60	1567
3	Vindhyachal (2)	68.50	50.00	642.70	470
4	Kawas	83.13	83.13	1,299.70	1300
5	Gandhar	38.48	38.48	765.20	765
6	Eastern Region			100.00	100.00
7	Northern Region				
	TOTAL NTPC			**6619**	**6568**
(II) NPC				1549.14	1549
(III) IPPs					

1.	GIPCL	25.00		340	63
2.	Essar	28.59		730	100
3.	GTEC	85.00	49.00	4,756	2747
4.	GSECL Gandhinagar Unit-5	75.00	80.00	1,150	1230
5.	GSECL Wanakbori Unit-6	75.00	85.00	1,150	1300
6.	GSECL Utran				
7.	GIPCL (M)	80.00	80.00	1,443	1443
TOTAL IPPs				**9,548**	**6883**
(IV) CPPs				250	250
(V) SANCTION HOLDERS: GIPCL(V)		75.00	75.00	209	209
(VI) NON-CONVENTIONAL				10	10
TOTAL PURCHASE				**18186**	**15469**

It will thus be seen that a maximum of 8117 MUs can be purchased from the Central Generating Stations against 8168 MUs projected by GEB. The quantity to be purchased from the IPPs has been reduced to 6883 MUs as against 9548 MUs as projected by the GEB. The quantities from other sources like CPPs, Sanction Holders and non-conventional sources remain the same. By changing of complexion of purchase from various sources the quantum of cheaper power has been increased in the total purchase mix, thereby reducing the total cost of purchase. Reduction in cost has been discussed in the following paragraphs.

5.12 Quantum of energy requirements and sources of procurement

5.12.1 To sum up the modifications in the GEB's proposal as a result of the analysis of the Commission, the findings are :-

(a) The total requirement of the GEB has been assessed at 37606 MUs as against 40084 MUs projected by them.

(b) Total generation from the GEB's own plants by improving the level of performance has now been estimated at 22137 MUs as against 21897 MUs estimated by them.

(c) The total power purchase from various sources has now been estimated at 15469 MUs as against 18186 MUs which was proposed to be procured by GEB.

(d) Merit Order Dispatch has been enforced on the power purchase reducing the purchase of power from costlier IPPs and increasing purchase of power at cheaper rates from Central Stations / IPPs.

6. Expenditure of the Board

6.1 Expenditure estimated by the Board

6.1.1 For the year 2000-01 the Board has estimated total expenditure of Rs.11683.28 crores. The break up of this expenditure is as follows :

Table 6.1.1
Expenditure of the GEB on functional basis

Sr No	Breakup of total costs of GEB	Rs. Crores
1	GEB generation costs	4643.53
2	Power purchase cost	5209.92
3	Transmission Costs	667.26
4(a)	Distribution HT Costs	387.52
4(b)	Distribution LT Costs	775.05
5	**Total costs including 3% return**	**11683.28**

6.1.2 The expenditure estimated by the Board has been classified on functional basis. In each of the function certain operational and financial costs have been included. For the purpose of analyzing the Board's expenditure and its valuation it would be convenient to reclassify this expenditure in accordance with various operational and functional costs. This will be as follows :

Table 6.1.2

Operational and Financial costs of GEB

Sr No	**Description**	**Amount (Rs in Crore)**
I.	**Revenue Expenditure**	
1	Fuel	3500.82
2	Power Purchase a) Fixed cost b) Variable cost	 2200.97 3008.96
3	Repairs & Maintenance	215.00
4	Employee cost	994.91
5	Administration & general expenses	101.64
6	Other debits	50.52
7	Less : expenditure capitalised	(-) 113.18
	Total Revenue Expenditure	**9959.64**
II	Financial Charges and Return	
1	Interest on Government loans	309.00
2	Interest to the Financial Institutions	631.23
3	Depreciation	657.41
4	3% Rate of return	126.00
	Total Financial Charges	**1723.64**
	Total Expenditure	**11683.28**

6.1.3 We shall review each of these charges mentioned above in the succeeding paragraphs.

6.2 Fuel Cost

6.2.1 In the estimates for the year 2000-01 GEB has estimated the fuel cost at Rs.3500.82.crore. This cost is based on the consumption of fuel in various

GEB's stations, which is expected in the year 2000-01, escalated over the previous year's cost by 9.3% in the case of coal, 2.2% in the case of lignite and10% in the case of naphtha.

6.2.2 Accepting the above assumptions, the Commission has adopted the same unit cost of fuel as has been adopted by GEB. As a result of this, as against the total fuel cost of Rs. 3500.86 crores for 21897 MUs, the Commission has allowed total fuel cost of Rs. 3540 crores for 22137 MUs. (including the generation cost for hydro power stations). The details of cost of these stations estimated by the GEB and cost allowed by GERC is given in **Annexure-C**

6.2.3 In the course of the year if there is any fluctuation in the cost of fuel the Board should approach the Commission with the required details for providing suitable charges in the form of fuel cost adjustment in the tariff. In view of the fact that the required details are not available and that the consumers should get an opportunity to express their view on the formula for fuel cost adjustment, the Commission has decided not to prescribe any formula for fuel cost adjustment in the present tariff order. The GEB should come to the Commission with such a formula for future. A specific direction to the GEB in this matter is included in para 9 of this order.

6.2.4 The Commission also finds that a proper system of accounting of fuel is imperative for effective management of fuel cost. The present system does not appear to be adequate for this purpose. **The Commission, therefore, directs the Board to devise and appropriate system for accounting of fuel (both quantity and cost) and supply the information for effective management of fuel cost.**

6.3 Expenditure on power purchase

6.3.1 As mentioned in para 5 above by enforcing the merit order dispatch, the Commission has brought down the requirement of power purchase to 15469 MUs. The maximum power is to be purchased from the cheapest source in order of the variable cost. By enforcing this order the total cost of power purchase will work out to Rs. 4433 crores. This is broadly divided as follows :

Table 6.3.1
Expenditure on Power Purchase

(Rs. in crore)

Sr No	Source of Purchase	Total cost as proposed by GEB	Total cost approved by GERC
1	NTPC	1187.00	1109.00
2	NPC	286.97	287.00
3	IPPs	3694.50	2928.00
4	CPPs	67.87	68.00
5	Sanction Holder	39.28	39.00
6	Non-conventional	2.25	2.00
	TOTAL	**5210.00**	**4433**

The details of the power purchase from each source have been laid down in **Annexure-D.**

6.3.2 In the course of hearing several consumer organizations raised objections against the increasing expenditure on power purchase. IEE Power Engineering Society also demanded that power purchase agreements with the IPPs should be reviewed. The Commission has carefully examined these objections. A review of the Board’s expenditure on power purchase will reveal the following trend:

Table 6.3.2

Purchase of Power by the GEB

Year	Cost of Power Purchased (Rs. In Crore)	Increase over the previous year (Rs. In Crore)	% increase over the previous year
1994-95	595.76	-	-
1995-96	1058.87	463.11	77.73
1996-97	1492.04	433.17	40.90
1997-98	1925.67	433.63	29.06
1998-99	3018.10	1092.43	56.72

1999-2000	4104.45**	1086.35	35.99
2000-01	5209.92**	1105.47	26.93

**As projected by GEB in their proposal for tariff determination

6.3.3 It is seen that the expenditure on power purchase is increasing every year at a rate of atleast 30%. The cost of over Rs.1000 Crore is added on this account every year. The details of power purchase brought out in **Annexure-D** will show that on account of the paucity of demand, in case of many IPPs like GPEC, GSECL and Essar, the GEB is not able to even draw the full power contracted with them. However in all these cases the fixed costs are required to be paid. It is also seen that variable costs of all IPPs is much higher than the cost of power from other sources. All these facts lead us to the conclusion that if we want to curb the ever increasing cost of power, the future commitments for the power purchase should be made after very careful consideration. This may not be enough. The existing cost of the purchase of power will also have to be reduced**. The Commission is of the view that with the passage of time, there has been a qualitative change in the environment for the participation of private sector in the power projects and the Board must make efforts in consultation with and co-operation of the IPPs to review the existing arrangements with a view to bring down the cost of power purchase.**

6.3.4 S.22 of the ERC Act, 1998 lays down the functions of the State Commission. In accordance with clause © of sub-section (1) of this section the Commission is to regulate power purchase and procurement process of the transmission utilities and distribution utilities including the price at which the power shall be procured from the generating companies, generating stations or from other sources for transmission, sale, distribution and supply in the State. It is clear from the above provision that purchase of power by the GEB from IPPs and all other sources clearly fall within the regulatory jurisdiction of the Commission. In view of rapidly rising cost of the purchase of power and consequent result of the excess of supply over the demand and the continuing liability of the Board for payment of the fixed cost even without purchase of any power, the Commission has come to the conclusion that there is an urgent need to regulate power purchase. As first step towards this the fresh commitments should be incurred after due consideration. The terms of agreement should not result in unduly high cost of power. The Commission would like to lay down these details by framing suitable regulations for the purchase of power. **However, pending the promulgation of regulations in this regard, the Commission directs that the Board should not enter into any agreement for the purchase of power without the prior consent of the Commission.**

6.3.5 The Power Purchase Agreements (PPA) already approved by GEB and the Government of Gujarat prior to the date of issue of this order may not be re-opened by the Commission. Similarly the PPAs for private power projects finalized through competitive bidding route, including the expansion of these projects also may not be reopened. However, PPAs falling under the following categories shall have to be referred to the Commission for approval.

i) As for the expansion of the power projects finalised through MOU route.

ii) No private power project shall be permitted through MOU route after the date of issue of this order.

iii) Any amendment to PPAs can only be carried out with specific and prior permission of the Commission. The same shall be necessarily referred to the Commission after prior approval of GEB and GOG.

(iv) No third party sale of power is permitted in case of IPPs except where specific provision is already incorporated in the PPAs

6.4 Repairs and Maintenance Cost

As seen from the submissions made by the Board as well as the details available from their annual accounts, the repairs and maintenance expenses have followed the trend as follows :

Table 6.4

Repairs and Maintenance Cost

Year	Amount (Rs. in Cr.)	Increase over previous year	Percentage increase over previous year
1994-95	118.98	-	-
1995-96	145.16	26.18	22%
1996-97	151.62	6.46	4.45%
1997-98	193.17	41.55	27.4%
1998-99	177.75	(-)15.42	(-)7.98%
1999-2000	196.00 (Projected)	18.25	10.26%
2000-2001	215.00 (Projected)	19	9.69%

As will be seen from the table given above the trend of expenditure on Repairs and Maintenance has been quite erratic. It suddenly increases or goes down in accordance with the requirement at a given time. Therefore, it is not possible to project this expenditure with a reasonable certainty. As on date we have figures of provisional accounts only for the year 1998-99 which have been submitted for audit. These show the expenditure of only Rs. 177.75 crores. Looking at the needs for repairs and maintenance and the contribution they make to the efficient running of the various plants, the Commission has decided to allow 7% increase on the projected expenditure for the year 1999-2000. Therefore, over the projected expenditure of Rs. 196 crores for 1999-2000 by allowing an increase of 7% the Commission allows the expenditure of Rs. 209.72 crores as against Rs. 215 crores requested by the GEB for the year 2000-01.

6.5 Employee cost

6.5.1 As seen from the accounts of the Board the employee cost yearwise is as follows :

Table 6.5.1

Employee Cost

Year	Employee cost (Rs. in crores)	Increase over previous year (%)	Increase over previous year(%)
1994-95	347	-	-
1995-96	393	46	13.25%)*
1996-97	442	49	12.46%)*
1997-98	486	44	9.95%)*
1998-99	718	232	47.73%
1999-2000	860 (projected)	142	19.8%
2000-2001	994.91 (projected)	134.91	15.68%

* Average 11.88% - say 12%

6.5.2 It was seen that the increase in the year 1998-99 is very high on account of the impact of the Pay Commission's recommendations. However, the increase of 19.8% in the following year i.e., year 1999-2000 cannot be explained. In response to a query by the Commission, in this regard, the Board explained that in addition to the salaries revised by the Pay Commission, terminal benefits were increased by more than 140% from Rs. 56.5 crores to Rs. 138.05 crores mainly due to increase in the payout as a result of the impact of the Pay Commission. The Board also sought to explain the employee cost by calculating normal annual increase and other increases in the salaries.

6.5.3 For the year 1999-2000 itself, in view of the Commission, the proposed amount of Rs. 860 crores by way of Employees' cost is excessive and unreasonable. For the year 1999-2000 the Board has projected an increase of 5% in the basic salary and 10% increase in Dearness Allowance over the estimated expenditure of FY 1999-2000. The Commission is unable to appreciate the basis of this presumption.

For the estimates of 1999-2000 where the cost is gone up by more than 19% the Board was sought to explain the major increase as a result of increase in terminal benefits. No mention has been made of these benefits in the present estimates. We are also handicapped by the absence of accurate figures, except the figures of provisional accounts for the year 1998-99 which is Rs. 718 crores including all the benefits. In these circumstances, it does not appear to be reasonable to allow more than 10% increase over the projected cost of 1999-2000. Therefore, for the year 2000-01 the Commission allows the cost of Rs. 946 crores as against about Rs. 994.91 crores estimated by the GEB.

6.6. Administration and General expenses

6.6.1 In the proposal submitted by the Board in December, 1999 the administrative and general expenses for the year 1999-2000 are projected as Rs. 92 crores. A trend of these expenses as seen from the accounts of the Board is as follows :

Table 6.6.1

Administration and General Expenses

Year	Amount (Rs in Cr.)	Increase over previous year (Rs in Cr.)	Percentage increase over previous year
1994-95	53.90	-	-
1995-96	62.44	8.54	15.84%
1996-97	68.69	6.25	10.00%
1997-98	78.18	9.49	13.81%
1998-99	84.34	6.16	7.87%
1999-2000	92.00	7.66	9.08%
2000-2001	101.64	9.64	10.47%

6.6.2. It is seen from the above that the percentage increase in expenditure is ranging from 7% to 15%. For the year 2000-01 the Board has asked for 10% increase over the estimated expenditure for the year 1999-2000. Here again GEB failed to furnish any firm requirement as well as the firm actuals except for the year 1998-99 where the actual was Rs. 84.34 crores. Looking at the modest rate of inflation in the recent time and utmost need for economy the Commission decides to allow only 5% increase in the Administration and General expenses during the year 2000-01. In place of Rs. 101.64 crores asked for by the Board, the Commission allows Rs. 96.6 crores towards Administration and General expenses.

6.6.3 It may be mentioned that the Board needs to ensure utmost economy in these expenses. At the same time, the expenditure incurred should be such as will improve the convenience of the customers. The Commission hopes that the Board will direct the administration and general expenses in a more efficient manner so that the customer services improve, and rendered effective and meaningful

6.7. Depreciation

6.7.1. For the year 2000-01 the Board has projected the depreciation by assuming the average rate of 7.07% over the projected gross value of assets for the year 2000-01. For the year 1999-2000 the Board had projected depreciation on various assets as follows:

Table 6.7.1

Depreciation

Rs. in crores

Nature of Assets	1999-2000	2000-2001
Generation	.278.97	308.23
Transmission	146.37	161.73
Distribution	169.65	187.45
Total	**594.99**	**657.41**

6.7.2. The expenditure of the Board on depreciation has followed the following trend.

Table 6.7.2

Depreciation on Assets

Year	Amount (Rs in Cr.)	Increase over previous year (Rs in Cr.)	Percentage increase over previous year
1994-95	341.07	-	-
1995-96	403.47	62.4	18.29%
1996-97	444.33	40.86	10.13%
1997-98	514.88	70.55	15.87%
1998-99	553.73	38.85	7.54%
1999-2000	594.99	41.26	7.45%
2000-2001	657.41	62.42	10.45%

6.7.3. It will be seen from the above table that the trend of expenditure has been gradually coming down. In other words the rate of acquisition of assets is gradually declining.

6.7.4. Several questions have been raised in the course of hearing about the expenditure on depreciation. Shri Vishvajit Mehta representing Federation of Gujarat Industries at Baroda submitted that the expenditure of the Board on depreciation was increasing while the assets were not increasing. This argument does not seem to be correct since even in the case of certified accounts upto the year 1997-98 it is seen that the expenditure on depreciation is increasing. This is on account of addition of assets. As will be discussed later, the Board compiles its accounts on the basis of Electricity (Supply) Annual Accounts Rules, 1985 which are certified by Comptroller & Auditor General of India. There is therefore hardly any reason to doubt about the accuracy of these figures.

6.7.5. Another matter which was raised in connection with depreciation is whether the Board has furnished complete information relating to the prudence of capital expenses during the last five financial years. The objectors wanted the Commission to judge the propriety of the acquisition of the assets.

6.7.6. The Commission has considered all the objections raised in the course of hearing. **The Commission is of the view that although the depreciation is an admissible expenditure in the revenue requirement the Commission must be satisfied about the propriety and usefulness of the assets acquired. The Commission therefore directs that from now onwards whenever the Board presents the proposal for determination of tariff, they must furnish alongwith the proposal a list of assets acquired during the preceding financial year and the cost incurred on them with detailed justification with the utility of the assets acquired. After examining the propriety and usefulness of the capital expenditure incurred, the Commission will take a decision to allow such expenditure on depreciation as is considered productive and useful.**

6.7.7. In their statement made in the course of hearing on 1.7.2000 the Board has also requested the Commission to permit them to defer the expenditure on depreciation. By deferring the depreciation the Board seems to be implying that the expenditure on depreciation for the year 2000-01 should become eligible for inclusion in the revenue requirement of the next future years. The question about the admissibility of the Board's expenditure in the revenue requirement of a particular year can be considered only when the complete proposal to that effect comes before the Commission. Therefore, while the Commission agrees with the Board that the expenditure on depreciation may be excluded from the revenue requirement of the year 2000-2001, particularly because it will result in a very sharp rise in the revenue requirement and consequently in tariff, the Commission is not able to express any view as to whether any such expenditure will become eligible for the future years. The Commission is of the view that such an expenditure can be considered only while determining the revenue requirement of the relevant year.

6.7.8. In view of the fact that the Board has requested and the Commission has agreed to exclude the expenditure on depreciation from revenue requirement, the Commission does not express any opinion on how much of the expenditure on depreciation is admissible as claimed by GEB for the year 2000-2001.

6.8 Interest and finance charges

6.8.1 The accounts of the Board disclose the interest and finance charges having grown in the following manner.

Table 6.8.1

Interest and Finance Charges

(Rs. in crores)

Year	Interest & Finance Charges	Increase over previous year	(%)increase
1994-95	398.08	-	-
1995-96	564.62	166.54	41.83%
1996-97	625.64	61.02	10.81%
1997-98	713.77	88.13	14.08%
1998-99	718.23	4.46	0.62%
1999-2000	783.01	64.78	9.01%
2000-01	940.23	157.22	20.07%

6.8.2 It will be seen that the interest and finance charges have registered a growth of 96% over the last five years. Borrowing of the Board has increased and financing is being done paying heavy rate of interest. For the year 1999-2000 the Board has paid the interest and finance charges amounting to Rs. 783.01 crores according to the projected estimates submitted to the Commission. This figure has further increased to Rs. 940.23 crores which means an estimated increase of 20.07%. The increase in these charges works out to Rs. 157.22 crores which is the highest in the last five years.

6.8.3 It is seen from the details made available by the Board in Appendix-5 to their latest submission made on 18th May, 2000 that money is borrowed at the effective interest rate ranging from 7.61% to 21.74%. GEB must make efforts to discharge the debts borrowed at high rate of interest and substitute it with the funds obtained at cheaper and reasonable rate. Several consumer organizations have also made the suggestion in the course of public hearings, stating that heavy burden is placed on the consumers on account of payment of interest at excessive rate by GEB. We see merit in the submission. Better financial management of available resources from collection of revenue and avoiding unfruitful expenditure can certainly improve position in this regard. Reference must be made to the arguments presented by the learned counsel for consumers Mr Darshan Parikh who read out in the course of arguments several extracts from the report of the Comptroller & Auditor General of India on the expenditure incurred by the GEB. His observations leave no doubt that there is a great scope of economy in the expenditure and with prudent financial management the need for borrowings and interest charges should come down. With these observations, the interest charges of Rs. 940.23 crores as projected by the Board are allowed.

6.9 Return on net fixed assets

6.9.1 In the original proposal submitted to the Commission for the year 2000-01 the Board had claimed for a return of Rs. 126 crores on the net fixed assets. However, in their statement on 1st July, 2000 in the course of hearing the Board submitted that they would like to defer their claims both for depreciation as well as the return on that fixed assets. The question, therefore, arises is whether not allowing the return to the Board is permissible under law in view of the provisions of Section 59 of the Electricity (Supply) Act, 1948.

Sec 59(1) of the Electricity (Supply) Act, 1948 reads as follows :

> "The Board shall, after taking credit for any subvention from the State Government under Sec. 63, carry on its operations under this Act and adjust its tariffs 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, tax (if any) on income and profits, depreciation and interest payable on all

> debentures, bonds and loans, leave such surplus as is not less than three per cent, 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 above provision contemplate that the Board is expected to adjust the tariff in such a manner so as to get minimum return of 3% on net fixed assets. If it falls short of that, then it is required to be adjusted after taking credit for any subvention from the State Government. The question to be decided is whether the provisions of Section 59 are mandatory and, therefore, the return is required to be allowed on that basis and further, to be carried forward in the succeeding year.

Section 52 of the Electricity Regulatory Commissions Act, 1998 provides that save as otherwise provided in Section 49, the provisions of the ERC Act shall have effect notwithstanding anything inconsistent therewith contained in any enactment other that this Act. Section 49 provides for protection only to the Consumer Protection Act, 1986 and the Atomic Energy Act, 1962. It is, therefore, clear that so far as the determination of tariff is concerned the provisions in the Electricity Regulatory Commissions Act, 1998 will have precedence over the provisions of the Electricity (Supply) Act, 1948. In course of the hearing when the provisions of section 59 and section 63 of the Electricity (Supply) Act, 1948 were pointed out to the Government, the Principal Secretary, Department of Energy & Petrochemicals stated that these provisions have been superseded by the provisions of Section 29 of the Electricity Regulatory Commissions Act, 1998. The Commission agrees with this view and holds that the tariff is required to be determined only in accordance with the provisions of Section 29 of the Electricity Regulatory Commissions Act, 1998 and no other provisions of the Electricity (Supply) Act, 1948 will govern the situation.

6.9.2 Let us now examine the provisions of Section 29 of the Electricity Regulatory Commissions Act, 1998. Sub-section (2) thereof lays down the guiding principles for the Commission to determine the tariff. Under clause (b) of this sub-section, one of the guiding principles in the case of the Board or its successor entities is also the principle under Section 59 of the Electricity (Supply) Act, 1948. Section 30 of the Electricity Regulatory Commissions Act, 1998 provides that where the Commission departs from the factors specified in clauses (a) to (f) of sub-section (2) of Section 29 they shall record the reasons for such departure in writing.

6.9.3 The Commission has carefully considered the aforesaid provisions. In the proposals, which have been submitted before the Commission, the revenue requirement projected by the Board is Rs. 3282.80 crores for the year 2000-01. The Board has also requested for reckoning the loss of previous year amounting to Rs. 1835 crores. This will bring the total requirement of the Board to Rs. 5117.80 crores. It is therefore clear that even if the demand for previous year's loss is kept aside for a while, since the Board itself does not wish to claim it in the current year, the revenue requirement of Rs. 3282.80 crores itself is an amount of a very high order. Judging in comparison with the existing tariff this amounts to mobilization of a considerable amount, consequently increasing the tariff by 48.56%. A comparative statistics of tariffs among various states would show that the existence of electricity tariff is the highest in Gujarat for almost all categories of consumers. In addition to the tariff, the *ad-valorem* basis of calculation of electricity duty creates the compounding effect of any increase in tariff. On the top of this is imposed a tax on sale of electricity which is prevalent only in Gujarat. The total burden on the consumers is, therefore, much higher than the increase in tariff, for e.g. a 48% increase in tariff would impose 60% burden on the consumers. It is also a fact that apart from the fuel cost adjustment, the tariff has not been revised since 1992 except in the case of industrial consumers, which was revised in 1996. In these circumstances, it appears grossly unreasonable to impose the burden of tariff to the extent of 60% increase in the total payments on the consumers.

6.9.4 Apart from sharp rise in tariff, the views and objections of the consumers expressed in the course of public hearings have also to be taken into account.

There is a sufficient scope of improving efficiency in GEB and enforcing economy in the expenditure of the Board. In these circumstances, to allow the revenue requirements as claimed by the Board would be grossly unjust to the consumers. Thus, the revenue requirement, being excessive and unreasonable, can not be accepted as submitted by the Board.

6.9.5 In these backdrops statement of the Board on 1st July, 2000 is pertinent. In this statement which has already been referred to in para 2.17 of this order, the Board has reduced its requirements. The Board itself offered reduction in cost to the extent of Rs. 350 crores. The Board also promised another reduction of Rs. 430 crores as a result of improvement of efficiency. An amount of Rs. 195 crores was also shown as reduction in interest on Government loans due to adjustment of subsidy payable to the Board against Government loans. It was stated by the Board that these decisions were taken as a result of discussions in a very high level meeting under the Chairmanship of the Finance Minister of Govt. of Gujarat where the Minister for Energy and other officers of the Department of Power and the GEB participated. It was as a result of these deliberations that the Board requested that they should be permitted to defer the claim of depreciation to the extent of Rs. 657 crores and return on net fixed assets to the extent of Rs. 126 crores.

6.9.6 Mr. J.C. Marathe on behalf of the GEB Engineers Association submitted before the Commission during the course of hearing held on 4/10/2000 that fuel cost (variable cost) alone for units generated by GEB and power purchased works out to Rs. 6509.78 crores /40084 MUS i.e. 162.40 paise per KWH. Subsidy to compensate at least at this rate for units catered to agricultural consumers must be available to GEB from Government of Gujarat. This works out to Rs. 2356 crores for 14507 MUS agricultural consumption for the year 2000-01. Against this fair and reasonable amount Government has proposed to pay Rs. 1100/- crores as fixed subsidy for agricultural sector. Either Government should be directed to pay this minimum amount to GEB or GERC should pass on the burden on beneficiary category for agricultural consumers. But in no case, Board or other category of consumers be made to suffer by way of this huge deficit or cross subsidy. We have considered the submission of Shri Marathe carefully. The Commission is of the view that having regard to the provisions of Section 29 of Electricity Regulatory Commissions Act 1998 read with Section 59 of the Electricity (Supply) Act 1948, we see no merit in the submission made on behalf of the GEB Engineers Association. It is only in respect of allowing or otherwise a particular expenditure or provision for the purpose of computing revenue requirement. It cannot, therefore be said that computing revenue requirement is in any way contrary to the aforesaid provisions of Section 29 (2)(b) of Electricity Regulatory Commissions Act 1998 or that of Section 59 of the Electricity (Supply) Act 1948. The submission, thus, being devoid of merits, is rejected.

6.9.7 In view of all the facts mentioned above, the Commission has come to the conclusion that considering aforesaid reasons, it would be proper to depart for the Commission from the guiding principles laid down in clause (b) of sub-section (2) of Section 29 of the Electricity Regulatory Commissions Act, 1998. The Commission accordingly decides that for the computation of revenue requirements for the year 2000-01 the depreciation amounting to Rs. 657 crores and the return on net fixed assets amounting to Rs. 126 crores would not be taken into account.

6.9.8 In view of the fact that the return is not to be taken in the account, the Commission has not verified the veracity of the amount of return claimed with reference to the net fixed assets of the Board. In the course of hearing several objectors have represented that the return should not be allowed on the basis of the projected asset base. It should be allowed only on the basis of the assets actually acquired and existing with the Board. In view of the fact that for the computation of revenue requirements for the year 2000-01 the rate of return is not being included, the Commission does not express any view on this point. Nor it is necessary to deal with all the contentions raised by the consumers in this regard. Suffice is to state that 3% return on its assets is not awarded at the request of the Applicant.

7. Revenue of the Board

7.1 Sources of Income

The main sources of the Board's income are the revenue from the sale of power, other income and miscellaneous receipts and revenue subsidies and grants. The Government from time to time gives subsidy to the Board for specific purposes which are provided in the Budget Estimates approved by the State Legislative Assembly. The Government also makes subventions from time to time u/s. 63 of the Electricity (Supply) Act, 1948. The subsidy received by the Board will reduce the revenue requirement of the Board to that extent.

7.2 Revenue from the Sale of power

7.2.1 Revenue from the sale of power is the main income of the Board which is recovered through fixed charges and energy charges prescribed for various categories of consumers. In their estimates for the year 2000-01 submitted to the Commission on 18th May, 2000 the Board has estimated a total revenue of Rs. 6760 crores from different sources. While computing this revenue, the Board has reckoned the fuel cost adjustment charge of 207 paise per unit on the basis of weighted average. This charge has been computed on the basis of estimated cost of fuel as discussed in para 6 above. Since the Commission has directed the Board to submit the proposed formula for Fuel Cost Adjustment (FCA) for approval, it is necessary to restrict this element in its estimated revenue. Looking at the present level of FCA and the expected rise in immediate future, the Commission has decided to club the element of FCA to the extent of 200 paise per Kwh, while determining the tariff for consumers and hence for computing the revenue of the Board. This is against a figure of 207 paise adopted by the Board for FCA. The total revenue of the Board on the basis of existing tariff, therefore, will have to be worked out, taking the fuel cost adjustment of only 200 paise per unit. If this is done, then the revenue from the sale of power works out to be Rs.6658 crores.

7.3 Other Income and miscellaneous revenue.

7.3.1 The Accounts of the Board reveal that other income includes interest on staff loans and advances, income from investments, interest from bank, income from trading and staff welfare activities, delayed payment charges from consumers and miscellaneous receipts. Similarly, the miscellaneous revenue includes rental for meters, service line capacitors etc., recovery from theft and malpractice, wheeling charges and miscellaneous charges from consumers. During the last 5 years income from these sources has shown the following trend.

Table 7.3.1

Other Income and Miscellaneous Revenue

(Rs. In crores)

Year	Other Income	Misc. Revenue	Total	%age in increase over previous year
1994-95	70.47	107.35	177.81	-
1995-96	101.77	110.92	212.68	19.61%
1996-97	162.53	142.07	304.60	43.21%
1997-98	201.59	133.85	335.43	10.12%
1998-99	253.91	210.97	464.61	38.51%
1999-2000			380.00 (projected)	(-)18.21%
2000-01			380.00 (projected)	(-)0%

7.3.2 It is, therefore, seen that the income from these sources have been growing at an average rate of about 20% per annum. The Board while submitting their application in September, 1999 estimated an income of Rs. 400 crores from these sources, but subsequently revised this estimate making it to Rs.380 crores. This will mean a reduction of 18.21% over the figure of the previous year, which may be the reduction probably for the first time in the recent years. The same figure has been adopted for the year 2000-01.

7.3.3 Responding to the queries from the Commission, with reference to the estimates for the year 1999-2000 the Board explained in details the reasons why they have decided to scale down the income from these sources. The Board stated that they have adopted a different approach for estimating income from these sources since they found that a substantial part of this income was actually derived because of the Board's ability to meet its liabilities. In the past it was possible because of better financial position of the Board. However, in the present position which is described as distress, the Board will not earn income from many of these sources. In circumstances explained by the Board, the Commission accepts the estimate of Rs.380 crores under the head "other income and miscellaneous revenue".

7.4 Revenue Subsidies and Grants

7.4.1 For the year 2000-01 the State Government proposes to give the following subsidies to the Electricity Board.

Table 7.4.1
Subsidies and Grants for the year 2000-01

(Rs. in crores)

Subsidy for HP based tariff on agriculture	**1100**
Subsidy on account of supply of free electricity to water works of village panchayats and voluntary organizations	50
Subsidy on account of 25% rebate to domestic consumers	60
Subsidy for providing electricity at lower rate to Surat Electricity Co. Ltd.	50
Total	**1260**

7.4.2 In addition to this, a subvention of Rs. 30 crores has also been provided. Since the claims for pending subvention to the extent of Rs. 343.88 crores have not yet been taken, a provision of Rs. 30 crores has been made in the budget estimates presumably as a token provision. It is thus, seen that there is a provision of Rs. 1290 crores towards subsidies and subvention in the approved budget estimates. The Board should ensure that the losses on account of specific claims, which are being subsidized are properly accounted for and the claims are promptly raised to the extent of losses incurred.

7.4.3 Since the budget estimates indicate the amount of subsidy on the basis of details available at the time of framing of the estimates, the Commission hopes that this provision would be augmented depending upon the actual consumption and consequent amounts of subsidy payable to the Board. This is particularly applicable to the subsidy payable on account of 25% rebate to domestic consumers, since this subsidy is available for consumption upto 100 units and may have to be augmented on the basis of total consumption in this category.

7.4.4 In the course of hearings and particularly in the hearing on 4.10.2000 many consumers and consumer organizations mentioned the need for the timely payment of subsidy by the Government. The subsidy constitutes about 20% of the total receipts of the Board. Looking at the heavy burden of interest on the Board, a large part being that towards borrowings for the working capital requirements, the Commission would like to recommend the Government to make appropriate arrangements in consultation with the Board to release the subsidy in regular instalments to ensure that ways and means position of the Board is not affected adversely. The previous claims of the outstanding subsidy should also be settled as early as possible.

7.5 Total revenue of the Board

7.5.1 The total revenue of the Board assessed by the Commission in the light of the above discussion can be summed up as follows :

Table 7.5.1

Total Revenue assessed by GERC

(Rs in crores)

Sr No	Particulars	Amount
1	Revenue from sale of power with the existing tariff, as modified by adopting the fuel cost adjustment charges of 200 paise per unit	6658
2.	Miscellaneous revenue	380
3	Subsidies and subventions	1260
	Total Revenue	**8298**

7.5.2 Total revenue of the Board from all sources as assessed by the Commission, will therefore be Rs.8298 crores.

8.0 Revenue Requirement for FY 2000-01

8.1 Sale of Energy:

GEB has assessed for the year 2000-01, total energy sales of 31,666 Mus. Its sectorwise energy consumption has been indicated in Annexure-E of their proposal for the year 2000-01. GERC Has assessed the total energy sales of 26,324 Mus, with the same pattern of sales as adopted by GEB, except for agricultural energy sales GERC has assessed the requirement of 9165 MUs instead of 14,507 MUs as adopted by GEB.

8.2 Revenue:

8.2.1 GEB has projected revenue by sale of electricity as Rs.6760 Crore, considering weighted average of fuel surcharge rate of 207 Paise per unit. Against this, GERC has considered fuel surcharge rate of 200 Paise per unit and revenue estimate is Rs.6658 Crore.

8.2.2 GEB has estimated miscellaneous revenue of Rs.380 Crore and the government subsidy of Rs.1260 Crore. This is accepted by GERC. Adding miscellaneous revenue and government subsidy to the revenue by sale of electricity, the total revenue as estimated by GEB works out to Rs.8400 Crore; while the assessment made by GERC works out to Rs.8298 Crore.

8.3 Revenue Expenditure:

8.3.1 Fuel cost of GEB's self generation and cost of power purchase:

Based on the generation schedule presented, GEB has estimated fuel cost of Rs.3501 Crore and cost of power purchase to be Rs.5210 Crore.

GERC has enforced merit order despatch and have re-worked the generation schedule of GEB power stations and bulk purchase from various agencies. On this basis, according to assessment made by GERC, fuel cost of GEB's generating stations works out to Rs.3540 Crore, and cost of power purchase as Rs.4430 Crore.

8.3.2 Against GEB's estimate of Rs.215 Crore towards repairs and maintenance, the assessment made by GERC is Rs.210 Crore.

8.3.3 GEB has projected the employee cost of Rs.995 Crore; while assessment made by GERC works out to Rs.946 Crore.

8.3.4 GEB has projected administrative and general expenditure of Rs.102 Crore; while GERC has assessed it as Rs.96 Crore.

8.3.5 GEB has projected other debits as Rs.50 Crore, and expenditure capitalised to be Rs.113 Crore. These estimates are retained by GERC.

8.3.6 The total revenue working expenditure projected by GEB is Rs.9960 Crore against Rs.9162 Crore assessed by GERC.

8.4 Interest and other expenditure estimated by GEB and accepted by GERC:

8.4.1	Interest on government loans	Rs.309 Crore
8.4.2	Interest on loans from financial institutions	Rs.631 Crore
8.4.3	Depreciation	Rs.657 Crore
8.4.4	Provisions towards 3% ROR	Rs.126 Crore
	Total	**Rs.1723 Crore**

8.5 In view of the above estimates of total revenue and expenditure, the net deficit as per GEB works out to Rs.3283 Crore and Rs.2587 Crore as per GERC.

8.6 Subsequent to the submission, GEB suggested saving and deferment of some of the costs totalling to Rs.1838 Crore as explained herein below:

8.6.1 **Employee Cost**: GEB has proposed reduction of Rs.50 lakh towards employee cost. However, this is not allowed by GERC in its estimate as employee cost has already been re-assessed and revised downward by GERC.

8.6.2 **Fuel cost (imported coal):** At present, GEB is purchasing coal from Coal India Ltd., which is costlier. GEB proposes to meet partial coal requirement through imports, so that overall cost of coal is reduced by Rs.250 Crore. This reduction is acceptable to GERC.

8.6.3 **Fuel cost (Naptha):** GEB expects naphtha price to get stabilized, as a result, it is estimated by GEB that it can save Rs.50 Crore in naphtha cost. In the revised generation and purchase schedule determined by GERC, generation by naphtha has been drastically cut down and as a result, the reduction proposed by GEB is not likely to be materialised and hence not allowed by GERC.

8.6.4 **Plant Load Factor:** GEB has proposed to increase the PLF of its generating stations and with the result, GEB expects a reduction of Rs.50

Crore in revenue expenditure. GERC, based on merit order operation has revised the generation schedule and improved the PLF of GEB power stations and economies thereof are already covered in GERC's assessment. GERC, therefore, is of the view that savings on this account has already been reckoned in the assessment of GERC and no further reduction on this account will be possible.

8.6.5 **Reduction in Agricultural Consumption.** GEB has reviewed its estimated agricultural consumption and also proposed to reduce T&D losses from 21% to 20%, as a result saving of Rs.280 Crore has been proposed. GERC has estimated energy requirements, considering 30% losses against 34.32% based on energy sales estimated as per Mishra Committee's Report and as such saving thereof has already been accounted by GERC in estimating the fuel cost and cost of power purchase. Hence, the above reduction has not been considered by GERC.

8.6.6 **Intensive Checking.** GEB is proposing to undertake intensive drive for installation checking and mobilise additional revenue of Rs.80 Crore. This is acceptable to GERC.

8.6.7 **Outstanding Dues.** GEB has proposed to mobilise Rs.100 Crore by collecting outstanding dues from the consumers. Since this revenue is already accounted in GEB's past year's accounts, recovery of outstanding dues of the past period cannot be treated as revenue for the current year. Hence, this is not acceptable to GERC.

8.6.8 **Reductions admitted by GERC.** With the above measures, GEB estimates reduction in revenue requirement of Rs.1838 Crore; while for the reasons stated above, GERC has admitted it to the extent of Rs.1308 Crore.

8.6.9 Allowing the deductions and deferments as spelt out above, the remaining deficit as stated by GEB works out to Rs.1445 Crore against GERC's estimate of Rs.1279 Crore.

8.7 **Reductions proposed in August 2000.** Further, government, in consultation with GEB, has proposed further deductions and consequently reduction in revenue requirement to the tune of Rs.300 Crore. This has been reviewed by GERC and GERC's observations are mentioned below:

8.7.1 **Expected reduction in tax on naphtha.** GoG proposes to reduce fuel cost by Rs.60 Crore on account of expected reduction in taxation on naphtha. Since GERC has substantially reduced generation from naphtha, the proposed saving is not expected to materialize, and hence has not been admitted by GERC.

8.7.2 **Reduction in T&D Losses**. GoG has proposed saving of Rs.70 Crore by reduction in T&D losses. How much quantum of losses proposed to be reduced against the T&D losses mentioned by GEB earlier, is not indicated. Since GERC has already considered 30% T&D losses against estimated T&D losses of 34.30%, the above saving is already taken care of in GERC's assessment of revenue expenditure and hence this reduction is not admitted.

8.7.3 **Heat rate / Auxiliary consumption.** GoG has further proposed estimated reduction of Rs.40 Crore towards reduction in heat rate/auxiliary consumption, and saving in fuel cost to the tune of Rs.20 Crore. GoG has not supported this saving by giving details about reduction in station heat rate as well as auxiliary consumption. The proposed reduction is, therefore, not considered by GERC.

8.7.4 **Interest payable on Government Loans.** GoG has proposed saving of Rs.110 Crore towards interest payable to the government, and the same is accepted by GERC.

8.7.5 **Revenue requirement.** Based on the deductions proposed by GoG, the net deficit and consequently additional revenue requirement as projected by GEB, would be Rs.1145 Crore. Against this, the assessment made by GERC, after adjusting the admitted reductions, indicates net deficit and consequently additional revenue requirement of Rs.1167 Crore.

8.7.6 The financial working of GEB – Revenue v/s. Expenditure – for Financial Year 2000-01 is given in **Annexure-F.**

9. Consideration of objections & suggestions

9.1 As has been mentioned in para 3 above, the Commission received a number of suggestions and objections from a large number of consumers and consumer organizations. These have been grouped under various heads in para 3 above. The Commission has considered all the objections and suggestions very carefully. The Commission is happy to mention that these suggestions and objections have provided a very crucial input to the Commission for determination of tariff. The objections and suggestions have been dealt with in the following paragraphs.

9.2 Admissibility of petition

9.2.1 The admissibility of the petition of GEB for revision of tariff has been mainly challenged on two grounds. The first is that the GEB has failed to demonstrate that it is working with optimum efficiency and unless this is done it has no right to seek revision of tariff. The second is that the figures presented by GEB are simply estimates, there is no transparency about that and they do not present a true and fair view of the affairs of the Board and therefore the request of the Board for revision of tariff should not be considered.

9.2.2 Let us take the first objection regarding GEB's failure to demonstrate that it is working with optimum efficiency. The Board has already made submission that it is working in an efficient manner. In support of this, in the course of presentation it has produced comparative data in respect of other State Electricity Boards in the country. It is seen from the presentation made by the Board on 8th March, 2000 that :

(a) In the year 1997-98, till which time this comparative data is available, in case of GEB, the share of O&M in total cost is 2.69% as against 3.15% of

Rajasthan, 4.11% of Maharashtra, 5.85% of Madhya Pradesh and All India Average of 4.51%.

(b) Number of employees per Million Units sold in the year 1996-97 were 1.9% in case of GEB, 2.6% in case of Madhya Pradesh, 3.7% in case of Maharashtra and 4 in case of Rajasthan against the All India Average of 3.5%.

(c) Similarly, number of employees per 1000 consumers were 7.9% in case of Gujarat as against 9.7% in case of Maharashtra, 11.9% for Rajasthan and 12.4% in case of Madhya Pradesh against the All India Average of 11.1%.

(d) Primary fuel consumption in the year 1997-98 was 0.72 kg/kw in Gujarat as against 0.81 kg/kw in Madhya Pradesh, 0.81 kg/kw in Maharashtra, 0.7 kg/kw in Rajasthan and the All India Average of 0.78 kg/kw.

9.2.3 None of the consumer groups had challenged these figures nor have they produced any material to show that the contention advanced by the Board is not correct. Here the efficiency should be viewed in a given circumstances, given environment and in a comparative picture. If the efficiency had been the best possible, then there would have been no scope of improvement either by tariff regulation or administrative measures and there would have hardly been any sense in undertaking the tariff exercise. What is to be seen is that the Board’s present performance standards should be comparable with other boards placed in similar environment. Our attempt should be now to improve the parameters further so that the Board’s performance improves in the coming years. In these circumstances, we do not consider that the application of the Board for revision of tariff revision is liable to be rejected on this ground.

9.2.4 The second argument against the admissibility is about the Accounts. Let us examine this in two parts. The first objection is that no firm figure has been presented, but only estimates have been made available and that because of this reason, the application should be rejected. The second objection about the method of accounting and the accounting principles has been examined in the paragraph 9.3 below.

9.2.5 To take the argument about the estimates, we should first understand the tariff exercise. The Board or the utility gives to the Commission all the details about their expenditure, for a particular year, which is competed and the accounts in for which have been compiled. The accounts are helpful to us to establish the standard and level of expenditure as well as revenue. From these they project into the coming year for which they wish to get the tariff determined. The projections are based on the basis of valid principles, expected performance and required income. It is on the basis of these estimates, that the tariff has to be determined. The expenditure or the income for the previous year can not be the same as the coming year and the year for which the tariff is to be determined can not have certified accounts since it is yet to complete. In the case of the Board however, when they submitted the proposals in September1999, the relevant year was 1999-2000 and they had already the firm figures in terms of provisional accounts (provisional only because they were submitted for audit and not because the figures were not final) for the year 1998-99. On the basis of this they had projected the figures for the year 1999-2000. However, since in the process of tariff determination the year 1999-2000 was over, therefore they had to submit further projections for the year 2000-01. The particulars of each projection have been clearly mentioned in the Board's submission. The formats in which the information is to be submitted were laid down by the Commission. Accordingly the Board furnished the figures and other details in the prescribed proforma. The Board also replied to this objection stating that it is a widely accepted regulatory practice in India to determine tariff in the basis of the estimates.

9.2.6 However, on the basis of the observations made by the consumers, the Commission has gone through the estimates thoroughly and the necessary cuts were applied or the norms laid down wherever the estimates were considered either defective or excessive. It may also be mentioned that the Commission has spent a long time in collecting additional data and information in respect of previous years as well as the present year, before it satisfied itself that the information and details available are adequate and sufficient. The Commission therefore is of the considered view that there is no objection in proceeding ahead on the basis of the estimates and the accompanying information and on that ground the application of the Board can not be rejected.

9.2.7 Mr. Avinash Pandya Learned Advocate appearing for Rajkot Engineering Association submitted that the GEB is not a state but a licensee and that accounts have not been prepared properly by GEB and as such its application for revision of tariff is liable to be dismissed. Shri Pandya relied upon the case of Lucknow Development Authority V/s. M.K. Gupta reported in AIR 1994- Supreme Court page 787. The said judgment of the Supreme Court is with regard to the scope and ambit of Consumer Protection Act 1986 holding that the provisions of the Act have to be construed in favour of the consumer to achieve the purpose of the enactment as it is a social benefit oriented legislation. In our view, the judgment as relied upon by Shri Pandya is not applicable to the issues relating to revision of tariff inasmuch as the Commission is required to fix the tariff in accordance with the provisions of section 29 of the Electricity Regulatory Commissions Act 1998.

9.2.8 Shri Darshan Parikh, Learned Advocate appointed for the purpose of protection of consumer interest has placed reliance on the case of Hindustan Zinc Ltd v/s Andhra Pradesh State Electricity Board reported in AIR 1991 Supreme Court page 1473. He submitted that the Commission should seek the advice of the consultative council before revision of tariffs. The Supreme Court , however, held in the said case that before the revision of tariff, it is advisable; yet failure to seek advice of the Consultative Council before revision of the tariff does not result in invalidation of the revised tariff. It may be pointed out that the Commission had convened a meeting of the State Advisory Committee appointed under section 24 of the ERC Act, 1998 on 19th February and 26th June, 2000 and appraised the members of the Committee about the proposal of GEB in regard to the revision of tariff and also sought views of the various members regarding fixation of tariff in domestic, commercial, industrial and agricultural areas. The Commission thus, made all earnest efforts to assess and evaluate the situation by seeking the advice of State Advisory Committee before contemplating the revision of the tariff.

9.2.9 Mr. Parikh also placed reliance on para –24 of the aforesaid judgment, wherein the Supreme Court had observed that the H.T consumers, including the power intensive consumers, are known power guzzlers and in power intensive industries, electricity is really a raw-material and thus this category of consumers forms a distinct class separate from other consumers like L.T consumers etc. In our opinion, this is besides the point, inasmuch as there is no point to decide for the Commission whether the H.T consumers can be classified as distinct or separate category of consumers, in facts and circumstances of the present application.

9.2.10 Shri Darshan Parikh, the Learned Advocate placed reliance on the case of Delhi Cloth and General Mills V/s. The Rajasthan State Electricity Board and others reported in AIR 1986 Supreme Court page 1126. The case before the Supreme Court was with regard to supply of electricity by the Board on concessional rate given under agreement. The said clause providing for review of tariff and the uniform tariff was made applicable in revising the tariff. In this case, the Supreme Court dealt with section 49, 49.A and 49.B of Electricity (Supply) Act 1948. There could not be any disputes about the proposition that section 49.A is an enabling provision and empowers the Board to revise the tariff from time to time and to frame uniform tariff for supply of electricity to a class of consumers enjoying special benefit under the agreement entered in under section 49(3). On establishment of the State Electricity Regulatory Commission and the powers with regard to determination of tariff having been conferred on the Commission, submission on the basis of section 49.A and 49(3) of Electricity (Supply) Act 1948 regarding revision of tariff pursuing the agreement is of no avail.

9.3 Accounts of GEB

9.3.1 Several objections have been raised about the accounts, mainly stating that they are not complete, the accounts for the latest year are not available, the accounts are delayed, remarks of Auditors have not been made available, the figures regarding depreciation are inconsistent and that no evidence has been produced to recognize the loss of Rs. 1835 crores of the previous year. The present accounts are wrong and misleading and till the correct accounts are presented the previous year's loss of Rs. 1835 crores should not be recognized.

9.3.2 First of all we should appreciate that GEB is a statutory body established under the Electricity (Supply) Act, 1948. Therefore the manner in which the accounts are prepared have also been laid down in the Act itself. Section 69 of this Act provides that the Board shall cause proper accounts and other records in relation there to be kept, including a proper system of internal check and prepare an annual statement of accounts including the profit and loss account and the balance sheets in such form as the Central Government may by Notification in the Official Gazette, prescribe by rules made in this behalf in consultation with the Comptroller and Auditor General of India and the State Government. Sub-section (2) of this section also provides that the accounts of the Board shall be audited by the Comptroller and Auditor General of India or by such person as he may authorize in this behalf. The section further provides that the accounts of the Board as certified by the Comptroller and Auditor General of India or any other person authorized by him in this behalf together with the audit report thereon shall be forwarded to the Central Electricity Authority and to the State Government within six months of the close of the year to which the accounts and audit report relate and that the Government may issue such instructions to the Board in respect thereof as it deems fit. The State Government also places the accounts of the Board together with the audit report before the house of the State Legislature.

9.3.3 In exercise of the powers conferred by Section 69 of the Electricity (Supply) Act, 1948 the Central Government has made the Electricity (Supply) Annual Accounts Rules, 1985 which lay down detailed procedure and forms for compilation of the Annual Accounts. Rule 7 of these Rules lays down the basic accounting principles and policies. The Board is supposed to prepare their accounts on the basis of these Rules.

9.3.4 It will thus, be seen that the accounts of the Board are prepared on the basis of aforesaid rules and policies. In respect of the year 1999-2000 the Board is supposed to complete its accounts by the end of June, 2000 and to that extent the accounts are certainly delayed. Even for the year 1998-99 although the Board has complied the accounts they have not been able to present audited accounts as well as the report of the CAG on these accounts.

9.3.5 In view of the facts stated above we feel that the Board's accounts are prepared on the basis of clear principles and procedure laid down in the Electricity (Supply) Annual Accounts Rules, 1985. **Whenever the Board approaches the Commission with the proposal to revise tariff, it must attach alongwith the proposal the completed accounts of the year immediately preceding the year for which the tariff is sought to be determined. In case the audited accounts are not available, the Board must get their accounts internally audited by a firm of Chartered Accountants and attach their certificate along with the accounts.**

9.3.6 As regards the objections raised for recognizing the deficit of Rs. 1835 crores pertaining to the year 1999-2000 is concerned, this has to be seen in the light of appropriate provision under which this has been requested by the Board. The Board has requested to treat this as a special appropriation within the meaning of para XVII(2)(c)(i). Schedule –6 of the Electricity Supply Act has been prescribed with reference to the provisions contained in sections 57 and 57-A. It is the basic provision laying down the procedure for working out the revenue requirements in respect of the licensees. A licensee, according to section 26 means a person licensed under Part-II of the Indian Electricity Act, 1910 to supply energy or a person who has obtained sanction under Section 28 of that Act to engage in the business of supplying energy. It has been clarified that it does not include the Board or a generation company. It may be mentioned that the provisions regarding Board's finance are contained in Chapter VI, which lays down how the Board's revenue will be computed. Therefore, the provisions of Schedule-VI are applicable only to the licensees and not to the Board. In view of the position, the request made by the Board for recognizing the deficit of Rs. 1835 crores pertaining to the year 1999-2000 as a special proposition within the meaning of the provisions of 6th Schedule of the Electricity Supply Act, 1948 is not covered by the law and hence can not be acceded to.

9.4 Performance related issues

9.4.1 Operational efficiency

The objections and suggestions on this para mainly deal with two aspects :

(a) Efficient operation of the GEB's plants with reasonably high Plant Load Factor, and
(b) Power purchases on merit order basis.

9.4.2 **Plant Load Factor.** The Commission has studied these suggestions very carefully and accepted the same. In computing the requirements of the Board, the Commission after discussing with the officials of the Board decided to enhance the PLF of the various stations, which will result in more generation in these stations. The revised Plant Load Factors have been reflected in the discussions on tariff, which are contained in the subsequent paragraphs.

9.4.3 **Power Purchase.** Similarly about the merit order of power purchases the Commission, after working out the variable cost of various sources of purchase has decided to arrange the purchases in accordance with the ascending order of the variable cost. This is because the fixed costs have already been borne by the GEB in accordance with the Power Purchase Agreements. The merit order has been arranged in such a manner that the maximum power is purchased from the cheapest source. Thereafter, according to the requirement, more power is purchased from the next cheaper source. The reduction of power purchase costs, as a result of this order has been reflected in the subsequent discussions on tariff determination.

9.5 Economy in expenditure

9.5.1 In this group most of the objections pertain to the high cost of fuel as a result of high transportation charges, shortages and grade slippages. Concern has also been expressed about the high interest paid by GEB and its borrowing at high interest rate. There is also a suggestion to curtail administrative expenditure.

9.5.2 **Interest Charges.** The Commission has considered these suggestions very carefully. As regards the high interest rates the Board has replied that if the principal amount of the new bonds of the value of Rs. 500 crores is added, the interest rate works out to 14% which is comparable with the prevailing rates in the bonds market. We however, agree that the interest charges of the Board are increasing steadily. On analysis, these charges will show that during the years 1995-96 and 1999-2000 the interest charges are nearly doubled. Interest burden of the Board by any standard is very high and all efforts must be made to reduce this burden, better financial management can certainly improve position in this regard. The Commission expects that in the course of next year the Board will make all efforts to reduce the interest burden.

9.5.3 **Administrative Expenditure**. About the administrative expenditure the Board has already mentioned that they have stopped the recruitment and the increase in the working is being made by redeployment. The Commission would like more efficient utilization of the existing manpower and better services to the consumers. This has to be done by the Board with the existing manpower providing suitable incentives pertaining to deployment.

9.5.4 **Cost of Fuel.** The most important point is about coal shortages, grade slippage and high transportation charges, which result in increase in cost of fuel. There is merit in the objection that the fuel costs is excessive and unreasonable which need to be curtailed. The Commission is, therefore, of the view that the Board has to find out ways and means to bring down the cost of fuel which is the major element in the high cost of power. This can be done by joint sampling, close supervision, reducing the transportation costs and the use of the imported coal. The Board has already mentioned that they are going to save Rs. 250 corers by importing coal. The Commission is of the view that there is still a lot of scope to reduce the cost of fuel, which is the highest in India for every unit generated. **The Commission, therefore, directs the Board to make a time bound programme to bring down the fuel related costs. This alongwith other measures to reduce the expenditure should be given to the Commission within a period of 3 months of issue of this order.**

9.6 Metering.

9.6.1 In this group of objections and suggestions, the consumers wanted the defective meters to be replaced, improve the quality of meters, metering supply for agricultural consumption and also to introduce the metering on the basis of apparent energy rather than KWH basis. These suggestions have been considered very carefully by the Commission.

9.6.2 It has been vehemently urged about misuse and abuse of electrical energy in agricultural area. The electrical supply was measured till 1983 in agricultural sector, when the HP based tariff was introduced. However, the meters have been removed, thereafter, supplying electricity in agricultural area is on HP basis. Therefore, on account of removal of the meters, the quantum of the energy supplied in agricultural sector is not known nor it can be known reasonably. It is also urged that since the electrical energy in agricultural area is un-metered, there is scope and possibility of concealing the real losses and there could have been tendency to hide losses and/ or losses can be attributed on account of such un-metering of energy in agricultural area. There has been no satisfactory reply from the GEB in regard to all these submissions and allegations of the group of consumers.

9.6.3 The Commission made its earnest efforts to assess and analyze the situation; GEB has shown the agricultural consumption as 13,600 MU as per its revised estimate submitted on July 1, 2000. The Commission has computed such consumption on the basis of the installed capacity of the pumps and the norms prescribed by Mishra Committee and that comes to nearly 9,165 MU. It is therefore clear that substantial quantity of consumption is shown by way of agricultural use and as such it is difficult to assess use of unauthorized power or loss of power by way of theft, that might have been added or included in the use of agricultural sector. These all have resulted on account of un-metering supply to the agricultural sector. As stated hereinabove, what cannot be measured cannot be managed. It is therefore essential that the GEB should insist and make its all earnest efforts to eliminate the situation of un-metering supply of power to agricultural sector. In other words, a scheme should be evolved out and made applicable to see that the supply of power in agricultural sector is metered and this objective is to be achieved as early as possible and time bound programme is to be made. This will be also beneficial for the farmers.

9.6.4 **Meters for Agricultural Supply.** As regards the issue regarding meters for agricultural supply. The electricity supply given for agricultural purposes was metered like any other supply till 1987 when the HP based tariff was introduced. Even when the tariff was based on HP there was no need to remove the meters. However, the meters have been removed. As a result of this the amount of energy being used by agricultural services is not known. Since this is not known the consumption is only assessed and more often than there is a tendency to show more consumption hiding the losses. Taking this fact into account the Commission has assessed that as against the agricultural consumption of 13,600 MU shown by the Board (as per the revised assessment on 1-7-2000), the consumption computed on the basis of installed capacity of the pumps and the norms prescribed by the Misra Committee Report, the Commission worked out only 9165 Mu. It will be seen that a very large amount of consumption is being shown against the agriculture while actually it may be a loss or unauthorized power used by someone else. This position has arisen only because of absence of metering. It is not possible to conceive that anything will be sold or given without measurement. Whatever is measured can only be managed. When it is not measured, its management becomes impossible. It is, therefore, in the interest of everyone that the electricity supply is measured.

9.6.5 **Difficulties faced by agricultural consumers**. It may be mentioned that the Commission is quite conscious about the strong objections of the certain groups of farmers against the introduction of metered supply. The farmers in north Gujarat represented before the Commission during the course of hearing that they have no objection against the metering the electricity supply, but the tariff should be based only on the HP capacity of the pumps. It is not necessary to state details of the malpractice and harassment and steps that could be suggested to curb/remove the same. The Commission has considered these objections very seriously and sympathetically. The Commission agrees that there is a scope for harassment of the agricultural consumers. But this should be handled administratively by the Board. The Commission would like the Board to establish new administrative mechanism and increased supervision by higher level personnel to avoid any kind of harassment of agricultural consumers in rural areas. The Commission also noticed that today there are more than 5000 consumers using agricultural supply with meters and perhaps an equal number of consumers under the Tatkal scheme using meters for electricity supply . The Commission has not received any complaint from any of these consumers. The Commission therefore, feels that it is possible now to make satisfactory arrangements under which the harassment arising out of meters can be kept under control and proper administrative arrangements can be made to ensure that guilty in such cases are severely punished. With these arrangements it should be possible to introduce the meters for agricultural supply. This will not only help the agricultural consumers to monitor their supply, but also to reduce it by using appropriate methods and keep their billing under the check. With the meters in place, the energy accounting would be more precise, the loss will be reduced and alongwith other consumers the agricultural consumers will also get benefit of reduction in the cost of power supply.

9.6.6 In view of the situation, the Commission directs the Board to install meters on all unmetered connections in a phased manner. All new connections should be given only with meters. The Commission would like the Board to prepare a phased programme for installation of meters on all unmetered connections and also for implementation of the administrative measures to eliminate the harassment to the consumers as a results of meters. The Commission would like the Board to prepare this plan after taking the consumers into confidence and to work hand to hand with consumers looking after their interest. The measures proposed to be taken in this regard may be submitted to the Commission within a period of 3 months of the issue of this order.

9.6.7 **Apparent Energy Meters.** The Commission has received one more important suggestion about the metering from the Institute of Apparent Energy Research. In the course of his presentation before the Commission, Dr. Kamat, the Director of the Institute, impressed on the Commission the advantages of introduction of meters which measure the electricity supply on the basis of apparent energy. These meters, which are also called Kvah meters reflect the impact of improved power sector in the total consumption. Better the power factor, the lower is the consumption shown in these meters. Dr Kamat mentioned that this will improve the power factor in the system and make available a lot of power for fruitful utilization. The Commission found the proposal of Dr Kamat very constructive and useful. The Commission understands that the Ministry of Power has also constituted a Committee to explore the possibility of introduction of these meters. The Commission understands that Dr Kamat had already supplied these meters to GEB in the past and the Board has the experience of utilization of these meters. **Since introduction of apparent energy meters is likely to be of a great**

help to the improvement of efficiency, the Commission would like the Board to study this proposition, explore the possibility of introduction of these meters in various areas and bring before the Commission a report containing their findings and the proposed action for introduction of these meters. This report may please be given to the Commission within a period of four months of issue of this order.

9.7 T&D losses and theft of power

9.7.1 Under this group of objections and suggestions the consumers have expressed concern about high rate of losses adopted by GEB and exhorted that it should be brought down. There has also been a suggestion that the GEB should undertake a detailed study for ascertaining the correct losses.

9.7.2 It is true that the losses of GEB are quite high. As will be seen in the subsequent analysis, the real losses are at much higher level than what have been projected by the GEB. The Commission is deeply concerned about the high level of losses and has therefore allowed only 30% losses to the GEB as against their level of 34%. The Commission also wants the GEB to reduce their losses in a phased manner over the next few years. It is the high level of losses, which is one of the factors responsible for making electricity costly in Gujarat. Therefore reducing the loss must be of paramount importance.

9.7.3 A reliance was also placed on the case of Suresh Chandra Sharma V/s. Chairman UP State Electricity Board and others reported in AIR 1998 Supreme Court, page 705. It was a public interest litigation in regard to allegations of large scale theft of electricity by consumers and loss of coal wagons during transit to Board. Eventually, the high power committee was appointed to inquire into the allegation of theft and loss of coal wagons, directing the Committee to design an instrumentation system for metering of electricity and system for energy auditing. It was thus stressed the need of energy auditing. We have dealt with this point of energy auditing herein under and have issued a necessary direction.

9.7.4 It is true that the GEB has not undertaken any detailed and meaningful study for ascertaining the losses. As mentioned earlier 40% of the electricity supply given to agricultural consumers is only assessed and not measured. This is likely to hide many losses**. The Commission therefore directs the GEB that it must undertake a detailed study to ascertain the losses. The study must include bifurcation of losses into technical and commercial losses as well as the measures to reduce the losses and its findings should be available to the Commission within a period of six months.** The commercial losses, apart from those arising as a result of defective meters are only a euphemism for power theft. The Board must come down heavily on the theft of power which appears to be widely prevalent according to the contentions of many consumers and consumer organizations before the Commission. The administrative arrangements of the Board must be strengthened to detect the power theft and once detected adequate measures should be taken against those indulging in power theft. It must be mentioned that theft of energy is a criminal offence u/s. 39 of the Indian Electricity Act, 1910 and anyone indulging in that is punishable with imprisonment for a term, which may extend to three years or with fine which shall not be less than Rs. 1000/- or with both. The Commission appreciates the Board's anxiety about the safety of the personnel of the Board in the course of anti-theft operations and the resistance by many anti- social elements. The Commission hopes that the Government would extend their full support to the Board in this operation. **The Commission also directs that the Board should take necessary steps to bring down the losses in the following manner :**

2000-01	**30%**
2001-02	**27%**
2002-03	**24%**
2003-04	**21%**

Further reduction in T&D losses can be looked into on completion of the study for assessing technical and commercial losses.

9.8 Tariff Structure and Agricultural Tariff

9.8.1 In para 3.6 and 3.7 suggestions made by various consumer organizations regarding tariff design, tariff structure and various related matters have been summed up. The Commission has carefully considered the suggestions made various consumers and wherever possible has tried to accommodate them in the existing tariff structure. This has also been discussed at various places in this paragraph. While some of the suggestions may not be implemented immediately they are nevertheless very useful and have been kept in view for their application on future occasion.

9.8.2 General suggestions on tariff

The main suggestion was regarding rationalization and simplification of tariff structure. The Commission has accepted the suggestion and wherever possible attempt has been made to rationalize the tariff structure. It is in this direction that discount has been introduced for the consumers availing power at high voltages where the cost of supply is less and for those using power at night, the night rebate has been made more attractive. While it is true that the HT Industries has got a very high tariff, but looking at the fact that the tariff structure for other consumers have not been changed for a long time and a fairly large amount of revenue requirement has now accumulated with GEB it is not possible to offer reduction to any category of consumers atleast immediately. However, the fact that the HT Industry is paying very high tariff has been kept in view and in such cases the increase has been restricted to minimum. For the same reason it has not been possible to avoid tariff increase in case of all other consumers.

9.8.3 Agriculture Tariff.

The Commission is quite aware of the difficulties faced by agricultural consumers and the totality of these circumstances. However, for the reasons which have been discussed at great length in para 12 or this order, it has not been possible for the Commission to avoid revision of present agricultural tariff. However, the grievances of the agricultural consumers have been duly attended to. As demanded by the farmers of the North Gujarat, the HP Rates for all capacity of pumps have been made uniform. Incentive has been provided by offering a fairly low rate for those willing to use meters and for the farmers availing electricity under the Tatkal Scheme it has now been decided that after five years they can pay for the power at normally metered rate and not at a higher rate as presently provided. The Commission has also noted the suggestion made by Bharatiya Kisan Sangh in the hearing on 4.10.2000 about the double chamber pump, which has been recently invented by one Mr. Jadeja of Bhuj. The Commission will certainly take necessary action to commend the use of this pump, in case after proper testing and investigation, it is really found helpful in reducing the electricity consumption.

9.8.4 Additional charges, rebate and fuel adjustment cost.

As per the suggestions made by the consumer organizations in the wake of rationalization, most of the additional charges and surcharges have been merged in the tariff and a single rate has been provided. It is, however, not possible to abolish the Time of Use charges since it has a specific purpose of keeping the peak load within certain ceiling. As mentioned earlier, the night rebate has now been increased to 50 paise/unit. In deference to the wishes of the consumers the Commission has decided that no formula for fuel adjustment cost will be decided till the GEB submits such formula with all information and the consumers are given an opportunity to express their views.

9.8.5 **Railway Tractions**

As mentioned earlier, the present situation does not really offer the opportunity to reduce tariff of any category of consumers. The difficulties faced by the Railways have, however, been noted by the Commission and looking at the present level of tariff the increase in railway tariff is only nominal to the extent of about 3.77% after adjusting the rebates for higher voltages.

9.8.6 Defence and Railway colonies

As requested by the Defence and Railway Authorities in the course of hearing separate tariff has been provided to the residential colonies of Defence and Railways.

9.8.7 HTP-IV Tariff

The Steel Industry using induction furnaces had demanded for the continuation of HTP-IV tariff by giving a special treatment to them. Similar demand has been voiced earlier by certain foundries using induction furnaces. The Commission has carefully considered the arguments advanced by them. While it is true that the profitability of these units may be partially influenced by the cost of electricity, the Commission finds that the electricity does not constitute a very high proportion in their total cost. Moreover, in terms of scheme of the Act under which the Commission is working no discrimination between different consumers can be made by the Commission, except on the grounds of improving efficiency of the system of electricity supply. It is not possible to distinguish one industry from the other on the basis of economics of that industry. This is a larger issue, which has to be taken care of by the agencies other than the Commission. In view of this, the Commission has decided not to prescribe any special tariff for the steel industry using induction furnace and has also decided to abolish the HTP-IV tariff prescribed earlier. The Industry will, however, be able to avail various rebates prescribed for high voltage supply, night supply etc. for the electricity used by them. The Commission has also pending with them a batch of applications made by All India Induction Furnaces Association and other individuals. **To the extent those petitions prayed for a separate tariff in the new structure to be prescribed by the Commission, their applications stand disposed of. As for the other issues raised by them in those applications, separate orders will follow.**

9.8.8 Maradia Chemicals and Chloro Alkali Association of Gujarat

Both these industries have argued for a special tariff for themselves in view of the high cost of electricity and un-economic operations. For the reasons stated in the above para the Commission is not able to agree for a special tariff and these industries like other industries will be governed under the normal HT Tariff with whatever discounts and rebates applicable to them. The Commission has also pending with them the application made by Maradia Chemicals Ltd. requesting for special tariff for their industry. This order disposes of the issue relating to separate tariff. As for other issues, detailed order of the Commission will follow.

9.8.9 LTP-III Tariff

In view of the representations made by various consumer organizations the Commission has decided to introduce LTP-III tariff for LT Industries based on maximum demand instead of connected load. This has already been included in the tariff structure ordered by the Commission.

9.8.10 Tariff for Hotels

The Commission has carefully decided the issue raised that the industrial tariff should be made applicable to the hotels. It is found that in the hotels the nature of load is not purely industrial load. It is the mix load having considerable component of commercial nature. It is, therefore, felt that the hotels must be continued to be governed by HTP-II tariff as at present.

9.9. **Additional charges, rebate and fuel cost adjustments**

9.9.1 This group of objections mainly deal with the additional charges like TOU charges, surcharges etc. which according to the consumers should be avoided, high delayed payment charges, attractive rate for night consumption and off peak consumption, power factor rebate beyond existing period of 2 years and new FCA formula.

9.9.2 The Commission has considered these objections and suggestions very carefully and found a lot of substance in them. After giving due consideration and also after studying the replies given by GEB the Commission has decided that :

(a) **Additional charges.** Additional charges apart from TOU charges should be abolished. The TOU charges are necessary so that the high consumption during peak hours is discouraged. This will go to reduce the total cost of supply. The additional charge is abolished and not provided in the new tariff.

(b) **Night consumption.** The Commission agrees that for night consumption the incentive and concession be provided so as to attract the consumers to transfer day load during night time and thereby improve the system load factor. This is reflected in the tariff determination.

(c) **Power factor rebate.** The Commission is of the view that power factor rebate should be continued beyond the existing period of two years. This is reflected in the tariff determination.

9.10 Fuel Cost Adjustment Charges (FCA)

9.10.1 The important objection of the consumers is about the formula relating to fuel cost adjustment. The consumers have stated that this formula is not transparent. And more amount than legitimate costs, it is alleged, are being recovered from the consumers under the head of Fuel Cost Adjustment Charges.

The Consumers and the group of consumers assailed the Fuel Charge Adjustment (FCA) as levied by GEB alongwith electricity tariff. Mr. Vishvajit Mehta, past President of Federation of Gujarat Industries at Baroda, submitted that the FCA is being decided by GEB unilaterally. He further submitted that the FCA policy should be transparent so as to enable the consumers to know the details thereto. Mr. H.B. Shah, Learned Advocate appearing for GEB, in reply submitted that the GEB was competent to fix and levy FCA and that it should not be known to public or consumers. In support of his submission, Shri Shah placed reliance on the case of M/s. Rohtas Industries Limited V/s Chairman Bihar State Electricity Board, AIR-1984 –Supreme Court-page 657. Shri Shah mainly relied upon the following observations of para –18 of the reported case. Para-18 reads as under:

"Some of the appellants have endeavoured to persuade us to go into the minutest details of the mechanism of the tariff fixation effected by the Board in an endeavour to demonstrate in relation thereto that a factor here or a factor there which ought to have been taken into account has been ignored. We have declined to go into those factors which are really in the nature of matters of price fixation policy and the Court will be exceeding its jurisdiction if it is to embark upon a scrutiny of matters of this kind which are essentially in the domain of the executive to determine, subject, of course, to the Constitutional limitations."

9.10.2 The Supreme Court has dealt with the authority and power of the State Electricity Board to fix different tariffs under section 49 (3) of Electricity ((Supply) Act, 1948, in case of M/s. Rohtas Industries Limited (supra).The levy of fuel surcharge on consumers by State Electricity Board was questioned as being arbitrary and violative of Article-14 of the Constitution of India. The Supreme Court held that section 49(3) expressly authorizes the Board to fix different tariffs for the supply of electricity to any person not being the licensee having regard, inter-alia to the nature of the supply, the purpose for which the supply is required and further relevant factors. The Supreme Court thus held that, where the State Electricity Board have levied the fuel surcharge by its tariff notification on the consumers receiving High Tension supply to their factories, while the consumers of electricity for domestic, commercial and irrigation purposes were left unaffected by such burden, the imposition of fuel surcharge on such consumers could not be said to be arbitrary and violative of Article –14.

9.10.3 Shri Mehta and others, appearing for the consumers have not challenged the levy of FCA as violative of Article –14. The State Electricity Board had powers to determine the tariff under the provisions of the Electricity (Supply) Act, 1948. However, on constitution of the State Electricity Regulatory Commission, such powers for determination of tariff has been conferred on the Commission by virtue of section 22 of the Electricity Regulatory Commissions Act, 1998. In this view of the matter, the observations of para-18 as aforesaid would not be applicable for determination of tariff by the Commission and the utility or GEB has to show the relevant figures of levy of FCA or any other charge so as enable the Commission to see it in transparent way. Under the circumstances, the Commission is unable to share the submission of Shri Shah, as the provisions of section 49 of the Electricity (Supply) Act, 1948 are not evoked and in the present case as the Commission is now enjoined upon to determine the tariff in accordance with the provisions of section-29 of the Act of 1998.

9.10.4 The various consumer groups have also stated that unless new formula is given by GEB and the consumers have an opportunity to express their view on this formula it should not be approved by the Commission. The Commission does see substance in the submission. Accordingly in the tariff, which is being determined by the Commission, no formula for fuel cost adjustment has been provided. The fuel cost prevalent upto the date has been merged in the tariff, which has been prescribed**. It will be open for the Board to come back to the Commission within a period of six months with the proposed formula for fuel cost adjustment and with all necessary information, which will be prescribed by the Commission. In event, the Board gives such formula the consumers will be informed of the same and only after offering the consumers due opportunity of hearing, the Commission will take a decision about the new formula for fuel cost adjustment.**

9.11 **Special tariff for certain groups.**

This has been dealt with in the paragraphs No. 9.8.7 and 9.8.8.

9.12 **Issues relating to customer services**

9.12.1 This section brings the important issues affecting the customers. Major points are as follows :

(a) Quality of supply

(b) Proper facilities for payment of bills

(c) Treating the date of presentation of cheque as date of payment

(d) Payment of security deposit at the same rate while increasing or reducing the contract demand.

(e) Non-levy of development charges.

(f) Delay in release of agricultural connections.

(g) Making the checking facility for meters available with the local staff and recovery of high electricity charges on detection of defective meters.

(h) Sending circulars to Chambers and Associations etc.

9.12.2 **Quality of Supply.** The Commission sees merit in the consumers' objections relating to quality of supply. The GEB must take necessary measures to improve the quality of supply, i.e. voltage and frequency of supply and making the supply continuous and interruption free. In their submission given in December, 1999 at Appendix-6 the Board has given a statement of feeder tripping and in Appendix-7 a statement of breakdowns. It is seen from these details that number of feeder tripping in certain feeders are very high and for certain feeders they have been high consistently over the last 3 years. For example, on 220 KV Timbdi Sub-station at 66 KV Timbdi-Patan No. 2 feeders, the breakdown are as high as 28 in the course of even the first five months of the current year and have been 18 and 17 in the last two years respectively. The duration of these breakdowns also range from 6 to 9 hours. Many other instances can be pointed out from the details where either breakdowns are too many or they are of the longer durations of more than 20 hours. The Southern Gujarat Chamber of Commerce and Industry have also complained in their representation about the frequent interruptions in the supply**. The Board needs to take adequate steps to ensure that the breakdowns are minimized and even if they occur, their duration is minimized. The Board should decide norms in this regard and arrange observance of the same.**

9.12.3 **Payment of Bills.** It was represented by the consumers that under the present system there are long queues for payment of bills, lot of time is wasted and they had also suggested that more staff should be deployed for receiving payment at various offices. The Commission is entirely in agreement with the suggestions that there should be proper and adequate facilities for payment of bills. **The Commission would like the Board to enter into arrangement with various banks for payment of bills. In the areas where such arrangements are not possible additional staff should be deployed for receiving payment. All efforts should be made to ensure that there is no inconvenience for payment of bills by the consumers. The Commission would like the Board to set up and finalise the norms in this regard and announce it to the public and make necessary arrangement for observing the same.**

9.12.4 **Payment by cheque.** The procedure in the Board is that if the payment of electricity bill is given by cheque, only the date of realization of the cheque is taken as the date of payment. If the cheque gets realized late, the consumer is made to pay penalty for the same eventhough the cheque was tendered by him well in time. The consumers voiced the grievances that such cheques of electricity bill payment are honoured take some times, on account of Bank holidays, time taken in clearing the cheques and all such eventualities are beyond control of the consumers. In the course of hearing the Board informed that they have already decided to accept this suggestion. The Board has amended the condition No.27(a)(ii) of the Conditions and Miscellaneous charges for supply by their Commercial Circular No.708 dated 1-5-2000. Now for the payment of bills amounting to less than Rs. Five lakhs made by cheque within seven days from the date of billing, through a single cheque only, the date of tendering the cheques in Board's office shall be considered as the date of payment. **The Commission notes that it is only a partial acceptance of the suggestion and would like the Board to review this condition after an experience of six months with a view to bring it on par with the standard commercial practice.**

9.12.5 **Security Deposit.** About the security deposit the procedure in the Board so far is that when the consumers come for either increasing or reducing the contract demand, the deposit on the new demand is computed on the basis of the current rate of security deposit, which may be much higher than the rate at which the consumer originally paid the deposit. This resulted in payment of security deposit even where the consumer wanted to reduce the load. The Board mentioned in the course of hearing that they have taken a decision to accept the suggestion of the consumers on this matter and necessary orders will be issued in due course.

9.12.6 The agricultural consumers have complained that there has been delay in releasing agricultural connections. The Board has admitted that a long time is taken before the connection is released. We find that the grievance of the consumers regarding agricultural connection is quite justifiable**. The Commission therefore directs the Board to review all pending applications and decide a time bound programme to clear the same. Results of such review may also be intimated to the individual consumers so that they know as to when they are likely to get the electricity supply. Such a review may be completed within a period of six months from the issue of this order. Results of such review may please be intimated to the Commission.**

9.12.7 The next suggestion of the consumers is about checking accuracy of the meter installed at their connection. Many times the meter is found defective and the consumers is charged past electricity bills in excess and penalty. It is urged that such an unilateral action and decision of GEB is unjust and illegal. The grievance of the consumers as regarding checking facility is quite justifiable**. The Board should make necessary arrangements to provide the facilities for checking accuracy of the meters with the local staff who should demonstrate the accuracy of the meter to the satisfaction of the consumers.**

9.12.8 The Board has replied that they have started sending circulars to the various Chambers and Associations. **The Commission would like the Board to make proper organized arrangements to send the circulars regularly to all the Chambers, Associations and the consumers' organizations and others who request for the same.** In the course of the Consumers' Contact Programme conducted by the Commission in November-December 1999 the Agricultural consumers complained that the entire correspondence of the Board was being carried out in English language, which would be difficult for farmers to follow. It is necessary for the Board to communicate in the language known to the consumers and customers**. The Commission is of the view that in order to make the consumers understand what they are entitled to and what they are paying for, all the booklets on the conditions of supply must be made available in Gujarati. All the circulars of the Board should also be made available in Gujarati and whosoever writes to any of the officials of the Board in Gujarati, must be given reply in Gujarati language only. The Board must make necessary arrangements to enforce this within a period of six months and send a report to the Commission accordingly.**

9.12.9 A section of consumers has made grievance with respect to recovery of delayed payment charges by the Board. When the amount of electricity bill is not paid within the time prescribed in the bill, such charges for delayed electricity bill is recovered. The purpose of such delayed payment charges is to see that the electricity bills are paid in due time and that there is no negligence on the part of consumers in respect of the electricity bill payment. The Commission having considered the grievances and suggestions made in this behalf carefully, does not feel to interfere the present practice for the reasons that the consumers and customers are required to pay electricity charges within the grace period mentioned in the electricity bill.

9.12.10 A section of the consumers requested the Commission during course of hearing that GEB should pay interest on security deposit, or when the payment of refund amount is made late or payment by adjustment is delayed. It is say of the consumers that the Board recovers Delayed Payment Charges in case of late payment of electricity bill; similarly Board should make loss good, if it is so suffered by the consumers. Shri Shah, learned Advocate for GEB refutes the suggestion, saying that it would not sound practical and proper to place consumers at par with a statutory body – GEB and it will cause loss to the GEB. The reliance was placed on case of Ferro Alloys Corpn. Ltd V/s A.P. State Electricity Board AIR 1993- Supreme Court page 2005, wherein the validity of the provisions of section 49 of Electricity (Supply) Act 1948 was challenged. The Supreme Court held that section 49 is not bad for want of guidelines. Shri H.B. Shah, Learned Advocate for GEB stressed that it is not enjoined upon the Board to pay interest on security deposit. The Supreme Court upheld that the clause in an agreement for supply of electricity , not providing for interest on the consumption security deposit made by High Tension consumers is neither arbitrary nor palpably unreasonable, nor even unconscionable in view of the following facts: (1) The consumer made the security deposit in consideration of the performance of his obligation for obtaining the service which is essential to him. (2) The electricity supply is made to the consumers on credit.(3) The billing time taken by the Board is to the advantage of the consumer. (4) Public revenue are blocked in generation, transmission and distribution of electricity for the purpose of supply. The Board pays interest on the loans borrowed by the Board. This is in order to perform public service. On those payments made by the Board it gets no interest from the consumers.(5) The Board needs back its blocked money to carry out public service with reasonable recompense.(6) The Board is not essentially a commercial organization to which the consumer has furnished the security to earn interest thereon.

9.12.11 It is not the case of GEB. If GEB entered into in an agreement with the consumers for security deposit, before acceptance of the amount of such security deposit, if there is an agreement with regard to the payment of interest on security deposit or otherwise, the aforesaid observation of Supreme Court will squarely apply. It is not the case of GEB that in such an agreement is entered into by or between the parties. We are therefore, unable to agree with the submission of Shri Shah to the general proposition that in no circumstances GEB is liable to pay interest on security deposit. However, since any interest so paid to the consumers is going to be added to the Board's requirements of revenue and increase the burden of tariff on consumers, at this juncture the Commission is not inclined to pass any order or direction regarding interest, as requested by the consumers.

9.12.12 There has been a demand from the consumers that development charges should not be levied. The Commission has considered this suggestion. Development charges are taken to obtain the consumer's contribution for the investment, which the Board is going to make for bringing the electricity to the consumers. Since an average figure has been decided for all consumers it has no direct connection with the actual expenditure incurred in case of each consumer. Considering the facts of the case and the financial position of the Board, development charges appear to be necessary. The Commission therefore is unable to accept this suggestion.

9.13 **Policy for release of power and increase or decrease in power load**

The Gujarat Chamber of Commerce and Industries has requested that a fixed time schedule of releasing power or changing the contracted demand within 60 days from the date of request of the consumers will go a long way in the planned development of industries. The commission appreciates the request made by the Chamber. In the changed scenario of power supply in which the Board is placed at present, there is a paramount need to increase the consumer base. All restrictions on the way of consumers to avail the power supply need to be removed. While determining new tariff the Commission has attempted to take care of some of such measures. **The Commission would like the Board to review the conditions of supply with a view to make the supply easily accessible to every consumer without any administrative hindrance. As regards the specific time limit of 60 days, since the views of the Board on this suggestion are not available, the Commission would like the Board to consider this suggestion and decide a specific time frame for releasing new connections and also to effect changes in the contracted demand as requested by the consumers. A time limit so decided should be intimated to the consumers.**

9.14 Issues relating to electricity duty, tax and subsidy.

9.14.1 The matter regarding imposition of electricity duty and tax on sale of electricity falls within the jurisdiction of the Government. Amendment in rates of this duty and tax is in fact the prerogative of the legislature. The Commission, therefore, has no direct jurisdiction to deal with this matter. However, since imposition of duty and tax has a direct bearing on the prevalent rates of tariff and the quantum of such duty and tax has a close relation on the cost of electricity in the State, the Commission does have the advisory jurisdiction u/s. 22(b) of the Electricity Regulatory Commissions Act, 1998. It is in light of this enabling provision that the Commission has carefully considered the matter regarding electricity duty and tax on sale of electricity. There is hardly any doubt that the burden of electricity duty is very high in Gujarat as compared to any other state. The system of *ad-valorem* duty makes affect of any tariff increase compounded further. The tax on sale of electricity is not prevalent in any other state in India. In fact in para 40 of its original submission of 14th September, 1999 the Board has mentioned that the duty ranges from 5% in respect of pumping water for irrigation purposes to 40% for commercial use. In the category of Low Tension Industry, the electricity used for lighting is taxed at 60%. The Commission is of the view that the duty structure needs to be rationalized. **The Commission hopes that taking advantage of revision of tariff rates for various categories of consumers, the Government would take the opportunity to review the structure and**

rationalize it so that the rate of duty becomes reasonable, stable and predictable.

9.14.2 The IEE Power Engineering Society has demanded that the details of electricity duty and tax collected through consumers must be shown by the GEB alongwith the details furnished by them. While it is true that the GEB is collecting this duty and tax as an agent of Government, it is equally true that this collection has a critical impact on the total price of electricity in the State. It will, therefore, be quite desirable that these details are furnished alongwith other information. The Commission would appropriately amend the filing requirements to enable the GEB to furnish this information.

9.14.3 A suggestion has been made that the burden of a particular sector should not be passed on to other groups through cross subsidy. While in principle the Commission agrees that cross subsidies have to be eliminated in the course of time to the extent possible, this has to be done progressively. Any reform in the tariff has to go hand-in-hand with improvement in efficiency, resulting in the reduction of cost. Once the cost becomes reasonable, further rationalization can be introduced. Till this thing happens, cross subsidies have to be borne by certain sections of consumers. It should, however, be seen that burden of such cross subsidies is limited to a reasonable amount.

9.14.4 A suggestion has also been made that the Government should waive the interest burden on loans given by them in lieu of Board’s dues on account of subsidies from the Government. This matter was taken up by the Commission with the Government and the Commission notes that the Government has decided to adjust an amount of Rs. 1835 crores towards subsidy arrears against the Government loans being carried by the GEB on its books. This will result in saving of interest to the extent of Rs. 195 crores by the GEB as seen from their statement on 1.7.2000.

9.15 Other Policy issues.

9.15.1 National Fuel Policy

Among other policy issues raised before the Commission was the issue about the National Fuel Policy which will equalize the cost of coal to all power stations. While the Commission has no jurisdiction over the matter of laying down National Policy the Commission appreciates the need for reducing the cost of coal reaching in the power stations in Gujarat. The Commission has, suggested the use of imported coal to reduce the cost of generation. However, it may be appropriate for the State Government to take up this matter with the Government of India.

9.15.2 Power Purchase Agreements

Another suggestion was about reducing the cost of power purchase. The Commission has already taken note of increase in the cost of power purchase. In para 6 of this Order the Commission has dealt with the issue directing the Board not to enter into any fresh Power Purchase Agreement without prior consent of the Commission. The Commission would bear in mind the suggestions made in this regard while framing the regulations for purchase of power.

9.15.3 Restructuring of power sector

Suggestions have also been made that the Government Should separate generation, distribution and transmission of power by forming separate independent companies to improve the efficiency in all these areas. There is hardly any doubt that there is acute need to improve the efficiency in all these areas. **The Commission would, therefore, recommend that separation of these activities should be seriously considered for improving efficiency in the Board's functioning. Pending the larger scheme of restructuring, atleast to start with, the distribution circles selected for independent functioning, should be made structurally autonomous with requisite operational and**

financial powers and corresponding accountability. Efforts must also be made to encourage larger group of consumers like Industrial Estates to take over the distribution functions so that losses are brought to a minimum level and services are improved.

10. Principles for determination of tariff

10.1 As mentioned in para 1 above, Section 29 of the Electricity Regulatory Commissions Act, 1998 itself incorporates certain guiding principles which the Commission is required to follow while determining the tariff. These principles embodied in section 29(2) are as follows :

(a) The principles and their applications provided in Sections 46, 57 and 57(a) of the Electricity Supply Act, 1948 and the Sixth Schedule thereto.

(b) In the case of the Board and 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 resources, good performance, optimum investments and other matters which the State Commission considers appropriate for the purposes of this Act.

(e) The interests 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 power plans formulated by the Central Government.

10.2 Since the applicant is a Board under Section 5 of the Electricity (Supply) Act, 1948, section 59 of that Act will be applicable as guiding principle in terms of the above provision. This section deals with the adjustment of tariff rates by the Board in a manner so as to earn a minimum return of 3%. We have dealt with this point extensively in para 6.9 of this Order. For the reasons recorded in the said para, the Commission has decided to depart from the principle laid down in S.29(2)(b) of the ERC Act,1998 and has not allowed the return of 3% as a special case, for the year 2000-01, as per the request of Applicant Board.

10.3 The second important principle laid down in section 29 is that the tariff should reflect progressively the cost of supply of electricity at an adequate and improving level of efficiency. This should be read coupled with other principles laid down that the electricity generation, transmission, distribution and supply are to be conducted on commercial principles. It will be seen from the various details furnished by the Board that the costs recovered through tariff considerably fall short of the cost of supply. This will be very clear from the table given below :

Table 10.3

Cost of supply and Actual recovery for the year 1999-2000

Rs.

Nature of supply	**Cost of supply**	**Actual cost recovered**
Transmission EHT	2.43	3.84
Distribution HT	2.77	4.07
Distribution LT	3.40	1.29

10.4 The average cost of supply during the year 1999-2000 was Rs. 3.14. As against this only Rs. 2.54 is being recovered from the consumers leaving a gap of 60 paise/unit. This situation is hardly compatible with the commercial principles of functioning. Therefore, the basic requirement is to increase the cost of electricity so that over a reasonable period of time it equals to the cost of supply. As has been mentioned earlier, no revision of tariff has taken place for all categories except industry since the year 1992. The tariff for HT consumers was revised only in 1996. The revision for agricultural consumers in 1997 has in fact been downwards. With all these years, the cost of inputs of the electricity has been steadily increasing. The All India Index of wholesale prices which was 207.8 in the year 1991-92 has now reached the level of 361 in the year 1999-2000. The Index for primary articles has gone up from 218.4 in 1991-92 to 389.3 in the year 1999-2000. Obviously, the Electricity Board had no additional resources to meet this increase in cost. Apart from the fact that it has damaged to the economy of the GEB, it has also created a large gap in the resources available for the Board to improve its services. Therefore, it is very difficult to escape the situation and the fact that the trend of non-commercial operation of the Board has to be reversed by deciding appropriate prices for each unit of electricity.

10.5 While it is important to increase the prices at a reasonable level, it is equally important to ensure that functioning of the Electricity Board is geared efficiently. The Commission is deeply concerned on the issue of efficiency and has had number of discussions with the Board to take steps in this direction. The Commission has already given directions about the level of losses, power purchase, metering of the supply and other matters relating to the efficient operations. The Commission expects the Board to implement them sincerely and achieve higher levels of efficiency.

10.6 It is also equally important to protect the interest of the consumers. As seen from the data detailed above, the Board had originally requested for revenue requirement to the extent of Rs. 3282.8 crores. The Commission finds that increasing the rate of tariff for bridging the entire gap to increase the tariff in a single year would make the resultant tariff very high excessive and unacceptable. The average tariff should have been adjusted every year to account for the increase in the cost of inputs. However, the penalty for this failure to do this should not be meted out to the consumers. The Commission is of the opinion that large industries as well as small domestic consumers will not be able to adjust in their respective budget a steep hike to recover Rs. 3282.8 crores. It is in view of these facts that the Commission agreed to accept the proposal of the Board to defer the claims for depreciation and the return on the net fixed assets by departing from the principles laid down in S.29(2)(b) of the ERC Act, 1998. Even thereafter the Commission has chosen to restrict the increase only to the extent of about Rs. 1156 crores, after rigorous examination of their requirements and by enforcing stringent norms.

10.7 Another important issue in bringing the tariff nearer to the cost of supply is a treatment to be given to cross subsidies. While the quantum of subsidy is decided by the Government, the cross subsidies are built-in in the tariff rates and have to be decided by the Commission. Since one of the guiding principles in section 29 clearly mentions that the tariff must progressively reflect the cost of supply of the electricity,.in principle, the Commission has decided to reduce the cross subsidies for each group of consumers. This however may not be possible immediately, but gradually the tariff has to move in that direction. In the tariff structure decided by the Commission, the quantum of increase has been kept higher, where the cross subsidy element was more. Care has, however, been taken that the sudden increase in cost is avoided.

10.8 Besides, the basic guidelines detailed U/S 29 of the Electricity Regulatory Commissions Act, 1998 for determination of tariff, the Commission also kept in view the following principles, while determining the tariff:

(1) The need to rationalize the tariff structure on the basis of cost of supply at different voltage ends and also to reflect the difference in cost of supply at different timings.

(2) The tariff should be fair, just and non-discriminatory.

(3) The tariff, to the extent possible, should be simple and easy to implement.

(4) That sudden shocks in tariff structure need to be avoided.

(5) Ensuring the stability of the tariff regime with the need for dynamic improvements in the efficiency of supply and demand.

11. Mobilisation of Revenue by Sale of Electricity:

11.1 As brought out in para 10 above on account of the low cost recovery and large deficit, the rise in tariff has become inescapable . The Commission has, therefore, decided to revise the additional revenue requirement of Rs. 1156 crores by suitable rise in tariff applicable to various categories of consumers.

11.2 GERC has determined the new tariff for various categories of the consumers, including licensees, which is presented as **Annexure-H** . The summary of the LT & HT tariff is presented in para 14.1 and 14.2.

The total revenue by sale of electricity at the existing tariff and new determined tariff together with category-wise break-up and additional revenue is given in **Annexure-G.** The broad break up is given in the table below:

Table 11.2

Details of additional revenue

Sl. No.	**Consumer Category**	**Total Revenue as per Existing Tariff (Rs. Crore)**	**Total Revenue as per Proposed Tariff (Rs. Crore**	**Net additional revenue (Rs. Crore)**	**Percen-tage Increase**
1.	Residential	764.04	838.75	74.71	9.78%
2.	Commercial	410.84	465.79	54.95	13.37%
3.	Public Lighting	36.74	40.57	3.83	10.42%
4.	Water Works	60.27	65.89	5.62	9.32%
5.	Industrial LT	1049.20	1201.30	152.10	14.49%
6.	Industrial LT – Power Loom	21.25	21.25	0.0	0.0%
7.	Industrial HT	3167.15	3318.38	151.23	4.77%
8	Railways	205.38	213.14	7.76	3.77%
9.	Licensees				
	(a) AEC	136.50	137.37	0.87	0.6%
	(b) SEC	562.80	605.48	42.68	7.58%
	(c) Kandla PT	4.40	4.51	0.11	2.52%
10.	Total (Without Agri. Sector)	6418.57	6912.43	493.86	7.69%
11.	Agri. Sector	239.36	902.06	662.70	
	Total	**6657.93**	**7814.31**	**1156.56**	

The overall increase in consumers other than agricultural sector is only 7.69%. In LT industries, increase on small consumers has been restricted in the range of 11.2% to 12.5%. Since the high tension tariff is already high and provides substantial cross subsidy, the increase is restricted from 3.7% to 4.8%. Since the licensee's tariff to their ultimate consumers depends upon grid tariff, no raise is proposed in respect of AECo, while 7.5% rise is made for SECo which is even lower than the cost to serve to the licensee. In case of agricultural sector during the year 1998-99, government has provided agricultural subsidy and subvention amounting to Rs.2000 Crore at the same scale down to Rs.1100 Crore for the year 2000-01. Thus, shortfall of Rs.900 Crore in government subsidy should flow as additional revenue from agricultural sector. However, in order to avoid very steep rise in the agricultural tariff, the Commission has envisaged to recover additional revenue of only Rs.662.70 Crore from agricultural sector.

11.3 The additional revenue is estimated as Rs.1156 Crore against GEB's requirement of Rs.1145 Crore and requirement of Rs.1166 Crore assessed by GERC.

12. Agricultural Tariff

12.1 The agricultural tariff is the tariff charged to the agricultural consumers for the energy utilized for irrigation pump sets. This energy is thus utilized for agricultural purposes. According to the statistics presented by the Gujarat Electricity Board for the year 1998-99 the number of agricultural consumers were 5.32 lakhs and the connected load was 48.82 lakhs H.P. According to the estimates given by the Gujarat Electricity Board, the total consumption for agriculture is assessed to be 14507 Mus in the year 2000-2001, giving the revenue of Rs.239 crores. This will work out to 16.4 paise per Kwh.

12.2 Presently the agricultural tariff is based on HP capacity of the electric motor employed to operate the pump. For a motor having rating less than or equal to 7.5 HP the rate charged is Rs. 350/- per HP/year. For a motor having rating of more than 7.5 HP the tariff is Rs. 500/- per HP/year.

12.3 The agricultural tariff has a chequerred history in the State. Till July, 1987, the State had metered tariff even for agricultural consumption. Till 1970 flat rate of 15.12 paise was being charged for consumption upto 75 units/HP and 12 paise for every additional unit. However, from 1st January, 1970 two part tariff was introduced. The fixed charges varied from Rs. 1.25 to Rs. 2/- per HP/month depending upon the capacity of the motor and the energy charges were 14 paise/kwh. These charges were later on increased and from 1st January, 1986 the fixed charges were as follows :

For the first 5 HP	Rs. 1.55 per HP/month
Next 10 HP	Rs. 1.80 per HP/month
Next 10 HP	Rs. 2.05 per HP/month
Balance above 25 HP	Rs. 2.30 per HP/month
Minimum charge	Rs. 35/- per HP/year

The energy charges were as follows :

For the first 1000 Units/HP	19 paise/unit
Next 1000 units/HP	15 paise/unit
Balance	9 paise/unit

12.4 This basic concept of metered tariff was changed from 1st June, 1987 when the HP based tariff was introduced. In that year the rates were as follows.

Upto 7.5 HP	Rs. 192 per HP per annum
More than 7.5 HP upto 10 HP	Rs. 360 per HP per annum
From 10 HP	Rs. 500 per HP per annum

From 16th November, 1990 the rates for category of more than 10 HP were reduced to Rs. 360/- per HP per annum. From 23rd January, 1992 only two slabs were introduced. Upto 7.5 HP the rates were Rs. 350/- per HP per annum and more than 7.5 HP the rates were Rs. 600/- per HP per annum. From 1st April, 1997 this was further changed and the rate for motors upto 7.5 HP was Rs. 350/- per HP per annum. But for motors of 7.5 HP and above the rate was reduced to Rs.500/- per HP per annum. Along with this HP based tariff the metered tariff was also continued and its rate was 50 paise per unit from 1st June, 1993.

12.5 One obvious outcome of the HP based tariff was that the agricultural consumption grew much faster than ever before. Since the utilization was not linked to the money payable, the control over use of power could not be exercised. The growth in consumption can be seen from the table below :

Table 12.5
Growth of Agricultural Consumption

Year	Ag. Cons. In Mus.	Increase in Mus.	Ag. Consumption as % of total sale
1986-87	2187		21.30%
1987-88	3841	1654	30.59%
1988-89	4402	561	32.01%
1989-90	5145	743	34.70%
1990-91	5670	525	35.45%
1991-92	6959	1289	40.18%
1992-93	7783	824	42.07%
1993-94	8652	869	42.27%
1994-95	8462	-190	39.31%
1995-96	10132	1670	41.03%
1996-97	10070	-62	39.34%
1997-98	10757	687	40.16%
1998-89	12221	1464	42.4%
1999-2000 (projected)	13342	1121	43.17%

It will be seen that from 2187 MUs constituting 21.30% of the total sales, the agricultural consumption in 10 years grew to 10070 MUs constituting 39.34% of the total sales. This figure in the last four years has further increased constituting more than 40% of the total sales.

12.6 Alongwith the increase in the utilization of power, with the prices almost remaining constant, the average realization from the agricultural consumers sharply fell after the introduction of HP based tariff. In 1960-61 the average utilization from the agricultural consumers was 13 paise/Kwh. With the periodical revision of tariff, in 1986-87 this figure was 58 paise/Kwh. On the introduction of HP based agricultural tariff, it sharply fell to 22 paise in the year 1987-88 and further fell to 20 paise in 1996-97 and 18.3 paise in 1998-99. It will thus be seen that the revenue realized from the agricultural consumers had no relation whatsoever with the increase in price inputs over the years. Even in the last 10 years the index of All India Wholesale prices has been nearly doubled from 182.7 to 361. If we could reckon from the year 1987 the ratio of increase would be about 2.2. Therefore, while the prices have increased by about 220%, during the same period, the agricultural tariff has come down by 68.4%.

12.7 As we discussed above in the principles for determination of tariff, if the supply of electricity is to be regulated on commercial lines it is not possible to keep the agricultural tariff at such a low level. It has been represented by various organizations of farmers in the course of the Consumers Contact Programme conducted by the Commission and also in the course of hearings that looking at the special position of the agriculture where the output prices are not controlled by the farmers and looking at the difficult position of water supply in western and northern Gujarat special consideration should be given to the agricultural tariff. We are entirely in agreement with this view. It is undisputed fact that agriculture deserves special consideration. Even many industrial associations have pleaded that consideration should be given to agriculture. The question, however, arises as to what extent the consideration should be given and whether the increasing cost of inputs should not be recovered from the farmers even to some extent. When the electricity is used and additional water supply becomes available as the input into agriculture, the result is higher yield per hectare of land of crops, which means improvement in productivity and increased income. One of the factors contributing to this increased income is input of the electricity which has made the additional water supply possible. If this is so, then some amount towards the increasing cost of inputs of electricity should be legitimately contributed by the farmers.

12.8 That the increasing use of electricity for drawing water has improved the productivity in agriculture is very clear from the statistics available. From the year 1980-81 the gross crop area in Gujarat has increased from 107.45 lakhs hectare to 110.56 lakhs hectares which means an increase of 2.88%. The yield per hectare during the same period for all food grains taken together has increased from 969 kg/hectare to 1426 kg/hectare which means an increase of 47.16%. The yield on oil seeds has increased from 7.66 kg/hectare to 13.25 kg/hectare during the same period which is an increase of 75.26%. Similarly, in case of cotton, the increase is from 189 kg/hectare to 400 kg/hectare and for tobacco it is from 1460 kg/hectare to 1781 kg/hectare. Taking the year 1969-70 as base year, in the year 1998-99 the total yield in respect of food grains had increased to 2.5 times. In case of non-food crops the growth of yield was about 3 times, the average of for all crops being 2.66 times in a period of nearly two decades. Similarly, in the year 1985-86 only 16532 hectares were being irrigated by wells and tube wells. This figure however, rose to 23863 hectares in the year 1996-97 which is an increase of 34.34%. During this period, the wholesale prices of agricultural commodities have also registered an increase. Taking the year 1981-82 as a base year the index of whole sale price of wheat was 308.3, 477 for rise, 472.5 for Jowar, 392.84 for bajri, 576.3 for tuar dal and 244.6 for ground nut. It will, therefore, be seen that the prices of almost all agricultural commodities have grown by an average of about 3 times. It is, therefore, very difficult to deny the argument that the agriculturists must share the increase the cost of electricity since they have also gained by increased productivity and higher prices of their commodities during these years.

12.9 The increase in use of water is also a cause of worry. The availability of water at low cost, looking at the very low rate of tariff, leads to indiscriminate use of water and does not provide any incentive for efficient utilization. Looking at the lower water table, particularly in the western and northern part of Gujarat, there is an utmost need to preserve the water. We understand that in many parts of the District of Mehsana, the brakish water is now coming out of the land and this situation will soon happen elsewhere also if the indiscriminate use of ground water is continued. If there is scarcity of water then the ground water becomes more valuable. It must be preserved to the utmost and all incentives must be directed towards conservation of this water. The lowest rates of electricity tariff which is less than 1/3rd of what they existed even before 13 years are not compatible with this requirement.

12.10 We are very conscious of the fact that ground water is very important for agriculture, particularly in Saurashtra and northern Gujarat. We are also conscious of the fact that these parts of the State are facing water scarcity atleast for the last 2 years. However, we believe that lower tariff for agricultural power is hardly a solution. **The problem is not of electricity, but the real problem is that of water management. It is necessary that comprehensive water management plan should be prepared to ensure that the available water is preserved and made available for all purposes particularly in these areas. We are sure, the State Government is conscious of this requirement and will do the needful in this regard.**

12.11 Taking into account all these factors we also believe that unmetered supply of electricity for agricultural purposes is working counter to the objectives of preservation of water resources in Gujarat. Whatever is measured is managed. Unmetered supply can not be managed, that is to say that the growth of agricultural consumption needs to be carefully looked into. It is our considered view that this problem can not be managed with any reasonable efficiency unless meters are installed on all agricultural installations. **We are conscious that this can not be achieved overnight, but we direct the Gujarat Electricity Board to prepare a time bound plan for installation of agricultural meters on all installations within a period of three years. The plan may be prepared and submitted to the Commission within a period of 3 months of receipt of this order.**

12.12 Taking into account all the facts discussed above, the Commission has decided that till the meters are installed on agricultural installations, the HP based tariff should be continued. However, looking at the various factors discussed above, the present rate of tariff with the rate of 18.3 paise/kwh can not be continued. It may be recalled that the Board in para 39 of their application submitted in

September, 1999 has drawn attention of the Commission that while agricultural consumers account for 41% of total consumption, yet the contribution to revenue from agricultural consumers is only 4%. Further as the consumption is not metered and a flat HP based tariff is levied there is no incentive for the consumer for conservation or optimum use. Again in their submissions made in February, 2000 in para 11, the Board has stated that no tariff revision has been effected for more than 3 years and the cost on account of fuel, payment to IPPs, salary etc. have increase many fold during the same period. Further for the current year the subsidy allocation from the Government is only to the extent of Rs. 1170 crores as against Rs. 2093 crores provided in the accounts for the year 1998-99. This itself makes a reduction of Rs. 900 crores in the income. The Commission can not overlook the poor financial position of the Board and the reasons therefor.

12.13 The question, therefore, arises as to what level the agricultural tariff should be fixed. As brought out earlier, presently the cost recovery for agricultural consumption is 18.3 paise for every unit consumed. Taking the total consumption of 13000 MUs and the subsidy amount of Rs. 1200 crores the amount of subsidy further adds a consumption of 92 paise/unit. The total recovery including the subsidy, therefore, comes to about Rs.1.10 paise as against the average cost of Rs.3.14 paise/unit. There is, therefore, a gap of Rs. 2.04 even after adjusting the subsidy given by the Government. Needless to say that this difference results in burden of cross subsidy on the other groups of users affecting the economy of their working.

12.14 The pricing of the use of electricity for agriculture has also been discussed in the Chief Ministers' Conference in 1996 when the Common Minimum Action Plan for Power was adopted. It was decided under this Plan that tariff for agricultural sector will not be less than 50 paise/kwh to be brought to 50% of the average cost in not more than three years. According to this, the tariff for agricultural sector must be fixed at Rs. 1.57 per unit by the year 1999-2000. Although the Commission would have liked to adopt this rate since it is already accepted under the Common Minimum Action Plant for power, it feels that this will result in a steep rise of tariff in the agricultural sector. Therefore, it is necessary to look for a rate which is more practicable in the given circumstances. We have already seen above that since 1993 the cost of metered supply in agricultural sector is 50 paise/unit. Similarly, the cost of power under the new Tatkal Scheme started by the Electricity Board two years ago is 70 paise/kwh in addition to other charges paid by the consumers. These two rates have been in existence in the State and are being paid by those who are covered by these rates. Taking these facts in view, the present average cost of supply and also the decision to continue the HP based tariff, the Commission is of the view that the agricultural tariff should be raised to such an extent so as to fetch an yield of about Re 1/- per unit in cases of all unmetered supply. For reckoning the consumption of the irrigation pumps the recommendations of the Mishra Committee should be adopted. This Committee has adopted a figure of 2200 to 2400 units/kw/year. This would mean 1700 units/BHP/year. Taking this basis the Commission has decided to adopt a rate of Rs. 140/- per BHP/month, which works out slightly less than Re. 1/- per unit. The distinction between pumps of 7.5 HP and above has been abolished, as demanded by the consumer groups.

12.15 Alongwith the HP based tariff the metered supply will continue. However, in order to provide incentive to all those consumers having metered supply the Commission has decided that there should be no increase in the rates for metered supply as well as on the electricity supplied under the Tatkal Scheme. These rates, therefore, remain unchanged and will be 50 paise/unit and 70 paise/unit for Tatkal Scheme as already at present. However, in order to meet the increasing fixed costs, a fixed charge of Rs. 10/- per BHP/month has been introduced in case of all metered supply tariffs. The Commission hopes that this scheme will provide incentive to all the users to minimize their consumption under the metered supply scheme.

13. <u>Classification, Rationalisation and Simplification of tariff</u>

13.1 In the existing tariff structure of GEB, there are number of tariff components. The tariff is, therefore, highly complex, unveiling and consumers find it difficult to understand. The present GEB electricity tariff is, thus, complex and confusing. While determining new tariff structure, the Commission has made effort to rationalize the existing structure and made it simple to the extent possible at the same time keeping minimum tariff components needed for various services.

13.2 GEB has to incur fixed cost and running cost (energy/variable cost) to render services and in essence these are to be borne by all the categories of the consumers. It is logical that each category pays this separately as far as possible giving due regard to various factors. Considering economics of metering and simplicity in billing large L.T. consumers having modest consumption, the rate structure shall have two options;

i) Energy charges with monthly minimum charges to assure certain revenue

ii) Fixed charges linked with connected load, energy charges linked with actual consumption.

13.3 In case of large block of power receiving supply at high tension, usually two part tariff with demand charges and energy charges are separately provided.

13.4 The existing GEB tariff is not cost related. L.T. consumers such as agricultural, water works, street light and domestic categories are cross subsidized by H.T. consumers, L.T. industries and commercial consumers. Though the Electricity Regulatory Commissions Act, 1998 provides to correlate electricity rate as per the cost of supply, it may take some time to achieve this target. Effort has however been made to improve cost recovery from the consumers receiving cross subsidy from other groups.

13.5 In case of H.T. consumers it would be practicable to link demand charges with corresponding fixed cost incurred by GEB. However, the demand charges are kept lower, to avoid hardships when consumer is operating manufacturing capacity at low level.

13.6 Wherever practicable rates are kept telescopic so that all the consumers get benefit of lower slabs to see that the malpractices are curbed.

13.7 The reasonable component of fuel surcharge rate i.e., Rs. 2.00 per unit is merged in the new tariff and no fuel surcharge clause is provided for the present; as such the new tariff will provide firm charges to the consumers.

13.8 The rationalization and principles adopted in fixing pattern of tariff for the various categories are discussed hereunder.

13.9 L.T. Consumers

13.9.1 **Rate LFD-1 – Residential Consumer.** In the existing tariff there are three different sets of energy charges, one for consumption upto 100 units, second for the monthly consumption exceeding 100 units, but upto 250 units and third for monthly consumption exceeding 250 units. In new tariff only one set of energy charges with energy rates **invertly** upward are provided for progressively higher block of consumption. The energy charges are telescopic so that all the consumers get benefits of lower slab tariff. The fixed charge component is rationalised. The minimum charges clause is retained to assure revenue for the service rendered. The **aggregate** permissible load for single phase has been increased from 3 KW to 6 KW. This simplicity in tariff is being attempted where large number of consumers are involved.

13.9.2 Rate LFD-II (For commercial premises)

The existing rate structure provides three components – (i) Fixed charges, (ii) Energy charges with telescopic structure, (iii) Minimum charges. This tariff structure is retained.

13.9.3 Rate LFD-III

The rate structure is simple having only one slab for fixed charges and energy charges have been retained.

13.9.4 Rate LTP-I (For motive service of connected load upto 125 HP)

At present there is only one set of tariff irrespective of nature/purpose of consumption. The tariff provides three components – (i) fixed charges related to contract load, (ii) energy charges for actual energy consumption, and (iii) minimum bill. The same structure is being adopted by reducing one slab in fixed charges. The charges for drawal of reactive energy is incorporated to encourage the consumers to provide capacitor for improving power factor of their installation. The minimum bill for seasonal industries is provided on annual basis instead of monthly minimum charges under Rate LTP-I

13.9.5 Rate LTP-II

This rate is applicable to the educational/research institution where machines are used for demonstration purposes and therefore, consumption is low. Hence, no fixed charges are provided and energy is billed on actual consumption.

13.9.6 Rate LTP-III (newly introduced)

During the public hearing, some consumers have represented that their connected load is high, but actual usage is lower and in many cases they are required to provide standby equipments and meters. In view of large diversity factor, maximum demand is low and therefore existing rate having fixed charges relating to connected load becomes prohibitive. To take care of their difficulties and needs new Rate LTP-III is introduced.

The LTP-III Rate is having three components - (i) Demand charges based on billing demand which is highest of 85% of contract demand, actual maximum demand and 40 KW, (ii) Energy charges for actual energy consumption, (iii) Reactive unit charges for drawal of reactive power.

The charges for reactive power will force the consumer to improve power factor by installing capacitors and consequently help GEB system .

13.9.7 **Rate LTP-IV (newly introduced)**

The concessional tariff LTP-IV is newly introduced for the LT Motive power consumers using electricity supply exclusively during night hours of 10.00 P.M. to 6.00 A.M. next day. The consumers operating for one shift prefer to work during the above restricted hours shall get substantial reduction in electricity charges.

13.9.8 **Rate WW**

The existing tariff structure with two components – (i) Fixed charges, (ii) Energy charges, have been adopted. This rate at present is applicable to water works only. It is considered to extend it to Sewage Pumping purpose also.

13.9.9 **Rate – AG (Agriculture)**

In the new Rate AG for agricultural purposes, two sets of rate structure are provided – (i) HP based tariff, (ii) meter based tariff consisting fixed charges and energy charges, and (iii) higher metered based tariff for Tatkal scheme, consisting fixed charges and energy charges.

In the existing HP based tariff two separate rate are provided for – (i) contracted load upto 7.5 BHP, (ii) contracted load above 7.5 BHP. In the new HP based tariff, the existing structure is rationalized and only one rate is adopted for irrespective of magnitude of contract load.

13.9.10 Rate TMP

The existing tariff structure is adopted.

13.10 H.T. Consumers

13.10.1 Rate HTP-1

The existing tariff structure is having number of components such as demand charges, energy charges, additional charges, surcharge. These are rationalized and only demand charges and energy charges components are provided in new tariff structure. The restrictions of lighting consumption and non-industrial load is removed and entire consumption shall be charged at bulk rate. This will avoid complex metering of various loads. The penalty for power factor below 90% and rebate for power factor above 95% as provided in the existing tariff structure is adopted. However, in the existing tariff structure, the rebate for higher power factor is restricted for initial two year. The Commission considered to extend it beyond two years as requested by the consumers during the public hearing.

The TOU charges are retained to encourage consumer to shift the load outside peak hours.

The concessional rate for night consumption is increased from 9 paise to 50 paise per unit.

The HT consumers availing supply at EHV are given discount on energy charges as under :-

33 KV/66 KV	½% on energy charges
132 KV/220 KV	1% on energy charges

The optional tariff for fertilizers has been deleted in new tariff structure.

13.10.2 **Rate HTP-II**

Similar changes as considered in new tariff HTP-1.

In place of existing Rate HTP-II, two sets of rates are adopted – (i) HTP-II(A), for the services covered under existing rate HTP-II(A), (ii) Rate HTP-II(B), a lower rate for residential colonies of railways, defence or such other housing colonies.

The rationalization of these rates has been made on similar that of Rate HTP-1

13.10.3 **Rate HTP-III**

The existing rate structure with modifications and rationalization as per Rate HTP-1, is adopted under the new tariff structure.

13.10.4 **Rate HTP-IV for steel industries**

This rate under the existing tariff has been deleted. No special tariff is proposed for steel industries using induction furnace under the new tariff structure.

13.10.5 Rate HTP-IV (newly introduced)

The new concessional tariff HTP-IV for HT consumer using electricity supply exclusively during night hours from 10.00 P.M. to 6.00 A.M. next day is introduced. This tariff will prove quite beneficial to the HT Industries operating for one shift and opt to work during night hours only.

13.10.6 Rate EL-1A (Grid tariff)

The existing structure is adopted.

13.10.7 Rate EL-1B (Grid tariff)

The existing tariff comprises of flat rate for energy charges. The same pattern is adopted for new tariff.

14. Summary of Tariff approved by the Commission

Summary of the tariff approved by the Commission is given in the following paragraphs :

14.1 **LT Tariff :**

Sr No	Consumer Category	Particulars & Rate
1.	Rate LFD-I (For Residential Premises)	**Fixed Charges :** Single Phase inst. - Rs. 5/- per installation/month Three Phase inst. - Rs.15/- per installation/month **PLUS** **Energy Charges :** First 50 Units - 270 paise/unit/month Next 50 Units - 300 paise/unit/month Next 100 Units - 360 paise/unit/month Next 100 Units - 410 paise/unit/month Above 300 Units - 470 paise/unit/month

2	RATE LFD-II (For Commercial Premises)	**<u>Fixed Charges</u> :** Per Installation 1-Phase – Rs. 45/- per month Per Installation 3-Phase - Rs. 75/- per month **PLUS** **<u>Energy Charges</u> :** First 50 units - 360 paise/unit/month Next 100 units - 420 paise/unit/month Above 150 units - 470 paise/unit/month
3	RATE LFD-III (Charity Institutions)	**<u>Fixed Charges</u> :** Per Installation – Rs. 25/- per month **PLUS** **<u>Energy Charges</u> :** For entire consumption during the month - 360 paise/unit/month

	RATE LTP-I (LT Industries)	**Fixed Charges :** a) Upto 10 BHP – Rs. 20/- per BHP/month b) Above 10 BHP : • First 10 BHP – Rs. 20/- per BHP/month • Next 40 BHP – Rs. 35/- per BHP/month • Next 50 BHP – Rs. 90/- per BHP/month • Above 100 BHP – Rs.140/- per BHP/month **PLUS** **Energy Charges :** a) For entire consumption during the month – 350 paise/unit/month b) For entire consumption during the month – 380 paise/unit/month PLUS Reactive Energy Charges For installation having contracted load of 50 BHP and above - 20 paise/KVARH/month
5	RATE LTP-II (For educational institutions)	**Energy Charges :** For entire consumption during the month – 400 paise/unit/month

	RATE LTP-III (Optional)	**Fixed Charges :** For first 40 KW – Rs. 60/- per KW/month Next 20 KW – Rs. 90/- per KW/month Above 60 KW – Rs. 150/- per KW/month **PLUS** **Energy Charges :** For entire consumption during the month - 395 paise/unit/month **PLUS** **Reactive Energy Charges :** 20 paise/KVARH/month
7	RATE LTP-IV Concessional night tariff using electricity exclusively during 10.00 P.M. to 6.00 A.M. next day	**Fixed Charges :** **30% of the fixed charges under the relevant LTP tariff** **PLUS** **Energy Charges :** 300 paise/unit/month **PLUS** **Reactive Charges :** For contract load of 50 BHP & above - 20 paise/KVARH/month
8	RATE WW (WATER WORKS & SEWAGE PUMPING) :	
	a) Other than Local Authority	**Fixed Charges** - Rs. 15/- per BHP/month **PLUS** **Energy charges** : For entire consumption during the month – 340 paise/unit/month

	b)	Local authority other than Gram Panchayats	**Fixed Charges** - Rs. 9/- per BHP/month **PLUS** **Energy charges :** For entire consumption during the month – 320 paise/unit/month
	c)	Nagar Panchayats	**Energy Charges :** For entire consumption during the month – 260 paise/unit/month
	d)	Gram Panchayats	**Energy Charges :** For entire consumption during the month – 230 paise/unit/month

9	RATE AG (AGRICULTURE)	
	a) HP Based b) Metered Tariff c) Tatkal Scheme	**Fixed Charges** – Rs. 140/- per BHP/month i) **<u>Fixed Charges</u> :** Rs. 10/- per BHP/month **PLUS** **ii) <u>Energy charges</u>** : For entire consumption – 50 paise/unit/month during the month i) **<u>Fixed Charges</u> :** Rs. 10/- per BHP/month **PLUS** **ii) <u>Energy charges</u> :** For entire consumption – 70 paise/unit/month during the month **<u>NOTE</u> :-** The consumer under Tatkal Scheme shall be eligible for normal metered tariff rate at (b) above on completion of 5 (five) years from the date of commencement of supply.

10	RATE STREET LIGHTING Local authority, industrial estates and other than local authority	**<u>Energy charges</u> :** For entire consumption during the month – 330 paise/unit/month
11	RATE TMP (Temporary) a) Rate LFD-I (Resi) b) Rate LFD-II (Non.Resi) c) Rate LFD-III (Edu.) d) Rate LTP-I,II,III	**<u>Energy charges</u> :** For entire consumption during the month :- • 425 paise/unit/month • 470 paise/unit/month • 470 paise/unit/month • 630 paise/unit/month

14.2 **H.T. Tariff :**

Sr No	**Consumer Category**	**Particulars & Rate**
1.	RATE HTP-I (For large power services – 100 KVA and above)	Demand Charges : First 500 KVA of billing demand – Rs. 85/- per KVA/month Next 500 KVA of billing demand – Rs. 120/- per KVA/month Next 1500 KVA of billing demand – Rs. 180/- per KVA/month Next 2500 KVA of billing demand – Rs. 205/- per KV/month Billing demand in excess of 5000 KVA- Rs.215/- per KVA/month **Plus :** **Energy Charges :** **For entire consumption :** i) Upto 1000 KVA contracted demand – 380 Ps/unit/month ii) Above 1000 KVA contracted demand – 410 Ps/unit/month **Plus :** TOU charges - 75 paise/unit/month **Less :** Concession for night hours (on the Consumption in excess of 1/3 of total Consumption during the month) - 50 paise/unit/month **Less :** **Rebate on energy charges** **For supply at EHV :** a) At 33/66 KV - 0.5% b) At 132/220 KV and above - 1.0%

2	RATE HTP-II(A) (For Railways, hotels, banks, studios, offices etc – 100 KVA and above)	**Demand Charges :** First 1000 KVA of billing demand -Rs. 150/- per KVA/month Billing demand in excess of 1000 KVA - Rs.225/- per KVA/month **Plus :** **Energy Charges :** For entire consumption during the month – 410 Ps/unit/month **Plus** : TOU charges - 75 Ps/unit/month
3	RATE HTP-II (B) (For residential colonies, townships, cantonments etc)	**Demand Charges :** For entire billing demand during the month - Rs. 110/- per KVA/month **Plus :** **Energy Charges :** For entire consumption during the month – 360 Ps/month/unit **Plus** : TOU charges - 75 Ps/unit/month
4	RATE HTP-III (For temporary period : 100 KVA and above)	**Demand Charges :** For billing demand upto contract demand – Rs 400/- per KVA/month **Plus :** **Energy Charges :** For entire consumption during the month – 620 Ps/unit/month **Plus** : TOU charges - 75 Ps/unit/month
5	RATE HTP-IV Concessional night tariff for the HT consumers using electricity during 10.00 P.M. to 6.00 A.M. next day	**Demand Charges :** 30% of the demand charges specified in rate HTP-1 **Plus :** **Energy Charges :** For entire consumption during the month – 300 paise/unit/month

6	RATE RAILWAY TRACTION	**<u>Demand Charges</u> :** For billing demand upto contract demand - Rs. 160/- per KVA/month **Plus:** **<u>Energy Charges</u> :** For entire consumption during the month – 455 Ps/Unit/month Rebate on Energy charges For supply at 132 KV - 1.0%
7	RATE EL-I (A) (Grid Tariff) For Licensees and Sanction Holders	**<u>Demand Charges</u> :** For billing demand upto Contract demand - Rs. 90/- per KVA/month **Plus :** **<u>Energy Charges</u> :** For entire consumption during the month – 320 Ps/unit/month Plus : TOU charges - 40 Ps/unit/month
8	RATE EL-I(B) (Grid Tariff) For non-generating licensees and sanction holders, having more than 100 MVA contract	**<u>Energy Charges</u> :** For entire consumption during the month – 270 Ps/unit/month

15. Tariff for Power-loom segment of Textile Industry

The Southern Gujarat Chamber of Commerce and Industry and several others filed a petition with the Commission in the month of July, 2000 requesting for a special tariff for power-loom segment of textile industry falling in the category of SSI/tiny sector. It was the plea advanced by the applicants that they were facing tough competition from the power-looms in Maharashtra where the electricity tariff was lower. They had requested the Commission to consider a special tariff for this segment of textile industry. Notices were issued on the Government of Gujarat, Gujarat Electricity Board, the Ahmedabad Electricity Co. Ltd and the Surat Electricity Co. Ltd. who were respondents in this matter. The reply from the Government of Gujarat, who was an important and necessary party in the matter, has been received only recently. The Commission has, therefore, decided that pending final hearing of this matter there will not be any change in the present tariff charged from the power loom sector of textile industry. The GEB will continue to charge them the same tariff as well as the fuel cost adjustment charges applicable on date. The tariff for the consumers covered by this sector would be determined on conclusion of hearing of this matter.

O R D E R

In the above premises, the application of Gujarat Electricity Board is partly allowed. The electricity tariffs are hereby revised at the rates shown in para 14 hereinabove subject to the terms and conditions of the Annexure “A to H”. This will have effect from the date of the order in respect of all the consumers of GEB except the Licensees. The electricity revised rates in case of the Licensees will be applicable after 3 (three) months on expiry of the notice to be served by the GEB to the concerned Licensees in accordance with the regulation No. 5 of the Gujarat Electricity Board (Grid Tariff) regulations 1984 made under section 79 (h) of the Electricity (Supply) Act 1948. It is hereby directed that the Gujarat

Electricity Board shall serve the notice as aforesaid within 3 days from the date of this order.

DIRECTIONS TO GEB

1. The Commission is of the view that it is incumbent on the GEB or any other licensee, seeking revision in electricity tariff, to state specifically the proposed rates of the electricity; and it is directed accordingly.

2. The GEB is directed to devise an appropriate system for accounting of fuel (both quantity and cost) and supply the information for effective management of fuel cost.

3. The Commission is of the view that by passage of time, it is likely a qualitative change in the environment for the participation of private sector in the power projects and GEB must make requisite efforts in consultation with and in co-operation of the IPPs to review the existing arrangement with a view to bring down the cost of power purchase and its is accordingly directed. It is further directed pending the promulgation of the regulations relating to power purchase, the utility or GEB should not enter into any agreement for the purchase of the power without the prior consent and approval of the Commission.

4. It is directed that the GEB or any licensee while submitting the application in respect of revision of electricity tariff, such licensee or GEB must furnish a list of assets acquired during the preceding financial year by such licensee or GEB and the cost incurred on such assets with detailed justification and with the utility of such assets acquired, at the time of submitting the application for the revision of tariff.

5. The GEB is hereby directed to submit the completed accounts for the year immediately preceding the year for which the tariff is sought to be determined, alongwith its application and proposal for revision of the tariff. In event of the audited accounts being not available, the Board must get their accounts internally audited by a firm of Chartered Accountant and attach their certificate alongwith the accounts.

6. The GEB is directed to make a time bound programme to bring down the fuel related costs alongwith other measures to reduce the expenditure which should be given to the Commission within a period of 3 months from the date of issue of this order.

7. As directed in para 9.6.6, the Commission directs the GEB to install meters on all un-metered connections in phased manner. All new connections should be provided only with meters. It is expected that the GEB will prepare a phased programme for installation of meters on all un-metered connections and also for implementation of the administrative measures to eliminate the harassment and hardship to the consumers as a result of the installation of the meters. The Board is further directed to prepare the requisite plan after taking the consumers in to confidence and to work with consumers in all co-operation looking after their interests and welfare. The measures proposed to be taken in this regard may be intimated to the Commission within a period of 3 months from date of the issue of this award.

   With the introduction of apparent energy meters, the improvement of efficiency is likely to be enhanced and therefore the GEB is expected to study this proposition and explore the possibility of introduction this meter, within the period of 4 months from the date of issue of this award.

8. As observed in para 9.10.4 hereinabove, the Commission directs GEB, that GEB must undertake detailed study to ascertain the losses

including bifurcation of losses into technical and commercial losses as well as the measures to reduce and ultimately to eliminate the losses and its finding should be made available to the Commission with a period of 6 months form the date of issue of this award.

9. As directed in para 9.10.4 hereinabove, it is open for the GEB to approach the Commission with the proposed formula for fuel cost adjustment alongwith necessary information, which will be prescribed by the Commission within a period of six months from the date of issue of this award. The Commission will inform the consumers and other concerned about the details of such information regarding fuel cost adjustment and having heard the consumers and other concerned in this regard, the Commission will take appropriate decision about the new formula for fuel cost adjustment.

10. As observed in para 9.12.2, the GEB is expected to take adequate steps and measures to ensure that the break downs are minimized and even if such breakdowns occur, its duration should be as short as possible. The Board should, therefore, decide the norms in this regard and arrange observance of the same.

11. As directed in para 9.12.3, the Commission would like the Board to enter into arrangement with various banks for payment of bills. In this areas where such arrangements are not possible, additional staff should be deployed for receiving payment by making necessary arrangement therefor. The GEB is directed to make all efforts that there is no inconvenience to the consumers in regard to payment of their electrical bills. The Commission expects GEB to set up and finalize the norms in this regard and announce to the public by making necessary arrangement for observing the same.

12. As observed in para 9.12.6, as regard to agricultural connections, the Commission directs the GEB to review all pending applications and decide a time bound programme to clear the same. Result of such review may be intimated to the individual consumers so that such consumers know as to when they are likely to get electricity supply. Such review may be completed within a period of 6 months form the date of issue of this order.

13. As observed in para 9.12.7, the GEB is directed to make necessary arrangement to provide the facility for checking accuracy of the meters with the local staff who should demonstrate the accuracy of the meters to the satisfaction of the concerned consumers.

14. As directed in para 9.12.8 herein above, the Commission directs the GEB to make proper organized arrangement to send necessary circulars regularly to all the Chambers, Associations and Consumer Organizations and others who request for the same. In order to make the consumers understand as what they are entitled to and for what they are paying, all the booklets regarding conditions of supply must be made available in Gujarati language. All the circulars of the GEB should also be made available in Gujarati language. This direction must be complied by the GEB within a period of 6 months from the date of this order by sending a report to the Commission regarding compliance.

15. As directed in para 9.13, the GEB is directed to review the condition of supply with a view to make the supply easily accessible to every consumer without any administrative hindrance. As regard the specific time limit of 60 days, since the views of the Board on this suggestions are not available, the Commission would like the Board to consider this suggestion and decide a specific time frame for releasing new connections and also to effect changes in the contracted demand as requested by the

consumers. A time limit so decided should be intimated to the concerned consumers.

16. As observed in para 12.11, the GEB should prepare a time bound plan for installation of agricultural meters on all installations within a period of 3 years. The plan may be prepared and submitted to the Commission within a period of 3 months form the date of issue of this order.

RECOMMENDATIONS TO GOVERNMENT OF GUJARAT

1. As observed in para 9.14.1, it is expected that taking advantage of the revision of tariff for various categories of consumers, the Government is requested to review the structure and rationalize it so that the rate of duty becomes reasonable, stable and predictable.

2. As observed in para 9.15.3, the Commission hereby recommend that separation of the activities of generation, distribution and transmission should be seriously considered for improving the efficiency in the functions of the GEB. Pending a the larger scheme of restructuring, the distribution circles selected for independent functioning, should be made structurally autonomous with requisite operational and financial powers and corresponding accountability.

JUSTICE(Rtd) D.G.KARIA	**B.M.OZA**	**R.K.SHARMA**
CHAIRMAN	**MEMBER(F)**	**MEMBER(T)**

Place: Ahmedabad
Date: 10th October, 2000

ANNEXURES

“A” TO “H”

ANNEXURE-A

STATEMENT INDICATING REDUCTION IN REVENUE REQUIREMENT PROJECTED BY G.E.B FOR THE YEAR 2000-01 IN ITS SUBMISSION DATED 18TH MAY 2000

HEAD OF ACCOUNT	Estimated Reduction of Deficit (Rs. Crore)
Employee Cost	50
Fuel Cost	250
Naphtha Cost	50
Increase in Plant Load Factor	50
Agricultural consumption and reduction in T&D Loss	280
Theft of Power	80
Collection of Outstanding Dues	100
Financing Measures:	
• Adjustment of outstanding subsidy against loan of GoG	195
• Deferment of surplus and depreciation allowance	783
Total	**1838**
Deficit Remaining	**1445**

ANNEXURE-B

STATEMENT INDICATING REDUCTION IN REVENUE REQUIREMENT IN REFERENCE TO LETTER FROM GOVERNMENT OF GUJARAT DATED 10TH AUGUST 2000

HEAD OF ACCOUNT	**Estimated Deduction of Deficit (Rs. Crore)**
Naphtha cost reduction due to taxation/imports	60
Further reduction in T&D losses	70
Reduction in heat rate/auxiliary consumption and saving in cost of generation	40
Fuel cost saving	20
Saving of interest payable to State Govt on reduction of interest rates against outstanding government loan	110
Total	**300**

ANNEXURE-C

VARIABLE COST OF GENERATION AS PER G.E.B/G.E.R.C FOR THE YEAR 2000-01

Sl. No.	Station	GEB			GERC		
		Proposed Generation in MUs	Proposed Rate (Rs. per Unit	Proposed Variable Cost (Rs. Crore)	Proposed Generation in MUs	Rate per Unit (Rs. per Unit)	Total Variable Cost (Rs. Crore)
1.	Dhuvaran	2,584	1.96	506.40	2,667	1.96	522.73
2.	Ukai	4,310	1.74	751.80	4,310	1.74	749.94
3.	Gandhinagar	3,178	1.86	590.10	3,178	1.86	591.10
4.	Wanakbori	7,448	1.70	1,269.10	7,592	1.70	1,290.64
5.	Sikka	1,117	2.01	224.50	1,117	2.01	2,24.51
6.	KLTPS	1,029	0.74	76.00	1,029	0.74	76.14
7.	Utran	943	0.88	82.90	956	0.88	84.12
	Total (Thermal)	20,609		3,500.80	20,849		3,539.18
8.	Ukai Hydro	793			793		
9.	Kadana Hydro	495			495		
	Total (Hydro)	1,288			1,288		
10.	**Grand Total**	**21,897**			**22,137**		

ANNEXURE-D

COST OF POWER PURCHASE BY GEB – YEAR 2000-01

Sl. No.	Station	PLF (%)		MUs Sent Out		As proposed by GEB Total Cost	As taken by GERC		
		As proposed by GEB	As taken by GERC	GEB	GERC		Fixed Cost	Variable Cost	Total Cost
(I) NTPC						**RS.CRORE**	**RS. CRORE**		
1	Korba	80.67	82.00	2,327.9	2366	236.27	73	166	239
2	Vindhyachal (1)	80.47	85.00	1,483.60	1567	200.26	76	132	208
3	Vindhyachal (2)	68.50	50.00	642.70	470	124.94	-	37	37
4	Kawas	83.13	83.13	1,299.70	1300	319.36	99	220	319
5	Gandhar	38.48	38.48	765.20	765	285.90	196	90	286
6	Eastern Region			100.00	100	20.23	-	20	20
7	Northern Region						-	-	-
TOTAL NTPC				6619.00	6568	1187.00	444	665	1109
(II) NPC				1549.14	1549	286.97	-	287	287
(III) IPPs									
1.	GIPCL	25.00		340	63	238.53	118	22	140
2.	Essar	28.59		730	100	504.25	287	30	317
3.	GTEC	85.00	49.00	4,756	2747	1798.50	578	709	1287
4.	GSECL Gandhinagar Unit-5	75.00	80.00	1,150	1230	333.62	169	176	345
5.	GSECL Wanakbori Unit-6	75.00	85.00	1,150	1300	343.74	184	179	363
6.	GSECL Utran						-	-	
7.	GIPCL (M)	80.00	80.00	1,443	1443	475.88	331	145	476
TOTAL IPPs				9,548	6883	3694.50	1667	1261	2928
(IV) CPPs				250	250	67.87	-	68	68
(V) SANCTION HOLDERS: GIPCL(V)		75.00	75.00	209	209	39.28	14	25	39
(VI) NON-CONVENTIONAL				10	10	2.25	-	2	2
TOTAL PURCHASE				18186	15469	5210	2125	2308	4433

ANNEXURE-E

Categorywise Sales for the Year 2000-2001

Sl. No	Consumer Category	Categorywise Consumption in MUs	
		GEB	**GERC**
1	2	3	4
1	Residential	3,162	3,162
2	Commercial	929	929
3	Public Lighting	123	123
4	Water Works	473	473
5	Industrial LT	2,672	2,672
6	Industrial HT	6,821	6,821
7	Railways	396	396
8	Licensees	2,583	2,583
9	TOTAL (WITHOUT AGRICULTURAL SECTOR)	17,159	17,159
10	Agri. Sector	14,507	9,165
	TOTAL	**31,666**	**26,324**

ANNEXURE-F
FINANCIAL WORKING OF THE GUJARAT ELECTRICITY BOARD
FY 2000-01

Sl. No.	Particulars	GEB	GERC
1	**REVENUE:**	**Rs. Crore**	**Rs. Crore**
A	REVENUE BY SALE OF ELECTRICITY	6,760	6,658
B	MISCELLANEOUS REVENUE	380	380
C	GOVERNMENT SUBSIDY	1,260	1,260
	TOTAL	8,400	8,298
2	**REVENUE EXPENDITURE**		
A	FUEL	3,501	3,540
B	Purchase Cost:		
	(a) Fixed Cost	2,201	2,125
	(b) Variable Cost	3,009	2,308
	Total of (B)	5,210	4,433
C	REPAIRS AND MAINTENANCE	215	210
D	EMPLOYMENT COST	995	946
E	ADMN. AND GENERAL EXP.	102	96
F	OTHER DEBITS	50	50
	SUBTOTAL 2(A) to 2(F)	10,073	9,275
	LESS EXPENDITURE CAPITALISED	(-) 113	(-) 113
	TOTAL OF 2	9,960	9,162
3	**INTERESTS AND OTHER EXPENSES**		
A	INTEREST ON GOVT LOAN	309	309
B	INTEREST ON LOANS FROM FINANCIAL INSTITUTIONS	631	631
C	DEPRECIATION	657	657
D	3% R.O.R	126	126
	TOTAL OF 3	1,723	1,723

4	TOTAL EXPENSES (2+3)	11,683	10,885
5	NET SURPLUS / DEFICIT (4-1)	(-) 3,283	(-) 2,587
6	DEDUCTION / DEFERMENT PROPOSED BY GEB		
A	EMPLOYEE COST	50	--
B	FUEL COST (IMPORTED COAL)	250	250
C	NAPHTHA COST	50	--
D	INCREASE IN PLANT LOAD FACTOR	50	--
E	AGRICULTURAL CONSUMPTION AND REDUCTIONIN T&D LOSSES	280	--
F	THEFT OF POWER	80	80
G	COLLECTION OF OUTSTANDING DUES	100	--
H	ADJUSTEMENT OF OUTSTANDING SUBSIDY AGAINST LOAN OF GoG	195	195
I	DEFERMENT OF SURPLUS AND DEPRECIATION ALLOWANCE	783	783
	TOTAL OF 6	1,838	1,308
7	DEFICIT REMAINING (5-6)	(-) 1,445	(-) 1,279
8	DEDUCTION PROPOSED BY GoG ON 10.8.2000		
A	NAPHTHA COST REDUCTION DUE TO TAXATION IMPACT	60	--
B	FURTHER REDUCTION IN T&D LOSSES	70	--
C	REDUCTION IN HEAT RATE, AUXILIARY C0NSUMPTION AND SAVING IN FUEL COST	40	--
D	FUEL COST SAVING	20	--
E	SAVING OF INTEREST PAYABLE BY GEB	110	110
	TOTAL OF 8	300	110
NET SURPLUS/DEFICIT (7-8)		**(-) 1,145**	**(-) 1,169**

Annexure-G
Categorywise Sales and Revenue for the Year 2000-2001

Sl No	Consumer category	Categorywise Consumption in MUs		Toral revenue as per existing tariff (Rs Crore)	Total Revenue as per proposed Tariff (Rs Crore)	Additional Revenue (Rs crore)	Percen-tage increase
		GEB	GERC				
1	2	3	4	5	6	7	8
1	Residential	3,162	3,162	764.04	838.75	74.71	9.78
2	Commercial	929	929	410.84	465.79	54.95	13.37
3	Public Lighting	123	123	36.74	40.57	3.83	10.42
4	Water Works	473	473	60.27	65.89	5.62	9.32
5	Industrial LT	2,672	2,672	1,070.45	1,222.55	152.10	14.20
6	Industrial HT	6,821	6,821	3,167.15	3,318.38	151.23	4.77
7	Railways	396	396	205.38	213.14	7.76	3.77
8	Licensees	2583	2583	703.70	747.36	43.66	6.20
9	TOTAL (WITHOUT AGRICULTURE SECTOR)	17,159	17,159	6,418.57	6,912.43	493.86	7.69
10	Agri. Sector	14,507	9,165	239.36	902.06	662.70	
	TOTAL	**31,666**	**26,324**	**6,657.93**	**7,814.49**	**1,156.56**	

ANNEXURE-H

TARIFF FOR SUPPLY OF ELECTRICITY AT LOW TENSION, HIGH TENSION, AND EXTRA HIGH TENSION

GENERAL

1. *These tariffs are exclusive of Electricity Duty, tax on sale of electricity, taxes and other charges levied by the Government or other competent authorities from time to time which are payable by the consumers, in addition to the charges levied as per the tariff.*

2. *All these tariffs for power supply are applicable to only one point of supply.*

3. *The charges specified are on monthly basis. GEB may decide the period of billing and adjust the tariff rate accordingly.*

4. *The energy supplied under these tariffs can be utilized only within the compact area of the premises not intervened by any area/road belonging to any person or authority other than the consumer.*

5. *Except in cases where the supply is used for the purpose for which the GEB has permitted lower tariff, the power supplied to any consumer shall be utilized only for the purpose for which supply is taken and as provided for in the tariff.*

6. *The above is without prejudice to the rights of the GERC to determine different tariffs for such consumers as it may consider it expedient under the provisions of Section 29 of the Electricity Regulatory Commissions Act, 1998.*

7. *The meter charges shall be applicable as prescribed under GEB's "Conditions and Miscellaneous Charges for Supply of Electrical Energy".*

8. *The Fuel Cost Adjustment Charges shall be applicable on approval from the Gujarat Electricity Regulatory Commission.*

PART-I

SCHEDULE OF TARIFF
FOR SUPPLY OF ELECTRICITY
AT LOW AND MEDIUM VOLTAGE

1.0 RATE LFD-I (FOR RESIDENTIAL PREMISES):

This tariff will apply to services for lights, fans and small electrical appliances such as refrigerators, cookers, heaters and small motors having individual capacity not exceeding two BHP attached to domestic appliances in the residential premises.

(a) Single-phase supply (aggregate load upto 6 KW)
(b) Three-phase supply (aggregate load up to 10 KW).

1.1 Fixed Charges/Month:

(a)	Single Phase	Rs.5/- per month
(b)	Three Phase	Rs.15/- per month

PLUS

1.2 Energy Charges: For the total monthly consumption:

(a)	First 50 units	270 Paise per Unit
(b)	Next 50 units	300 Paise per Unit
(c)	Next 100 units	360 Paise per Unit
(d)	Next 100 units	410 Paise per Unit
(e)	Above 300 units	470 Paise per Unit

1.3 Minimum bill (excluding meter charges):

(a)	For single-phase installation	Rs.30 per month
(b)	For three-phase installation	Rs.150 per month

If the part of the residential premises is used for non-residential (commercial) purposes by the consumers located in rural area with population upto 10,000 as per Census-1991, entire consumption will be charged under this tariff.

2.0 RATE LFD-II (FOR COMMERCIAL PREMISES):

This tariff will apply to the services for the purposes specified in the rate LFD-I in respect of commercial premises, such as shops, workshops, hotels, restaurants, showrooms, offices, etc., etc.

2.1 **Fixed Charges:**

(a)	For single-phase supply (the aggregate load should not exceed 6 KW including the load of small motors)	Rs.45 per month per installation
(b)	For three-phase supply (the aggregate motive power load up to 10 KW per installation)	Rs.75 per month per installation

PLUS

2.2 Energy charges:

(a)	For the first 50 units per month	360 Paise per unit
(b)	For the next 100 units per month	420 Paise per unit
(c)	For the remaining units per month	470 Paise per unit

2.3 **Minimum Bill** (excluding meter charges):

(a)	For single-phase installation	Rs.60 per month
(b)	For three-phase installation	Rs.200 per month

3.0 RATE LFD-III:

This tariff is applicable to the educational and other institutions registered with the Charity Commissioner.

(a)	Fixed charges	Rs.25 per month
(b)	Energy charges	360 Paise per Unit

4.0 RATE-LTP:

This tariff shall be applicable for motive power services

4.1 RATE LTP-I:

(This tariff is applicable for aggregate motive power load not exceeding 125 BHP).

4.1.1 **<u>Fixed charges per month</u>:**

For an installation having the contracted load upto 10 BHP	Rs.20 per BHP
For installation having contracted load exceeding 10 BHP:	
(i) For first 10 BHP of contracted load	Rs.20 per BHP
(ii) For next 40 BHP of contracted load	Rs.35 per BHP
(iii) For next 50 BHP of contracted load	Rs.90 per BHP
(iv) Balance BHP of contracted load	Rs.140 per BHP

PLUS

4.1.2 <u>Energy charges</u>:

(a)	For installation having contracted load upto and including 10 BHP: For entire consumption during the month	350 Paise per Unit
(b)	For installation having contracted load exceeding 10 BHP: For entire consumption during the month	380 Paise per Unit

PLUS

<u>4.1.3 Reactive Energy Charges:</u>

For installation having contracted load of 50 BHP and above for all reactive units (KVRAH) drawn during the month	20 Paise per KVARH

4.1.4 **<u>Minimum bill per installation per month</u>**
<u>for consumers other than Seasonal Consumers</u>:

(a)	When contracted load is upto 50 BHP	Rs.190 per BHP
(b)	When contracted load exceeds 50 BHP	Rs.390 per BHP

4.1.5 **<u>Minimum Bill Per Installation for Seasonal Consumers</u>:**

(a) "Seasonal Consumer", shall mean a consumer who takes and uses power supply for ice factory, ice candy machines, ginning and pressing factory, oil mill, rice mill, huller, salt industry, sugar factory, khandsari, cold storage plants (including such plants in fisheries industry), tapioca industries manufacturing starch and for such other industries as may be approved from time to time and which work only during a part of the year.

(b) Any consumer, who desires to be billed for the minimum charges on annual basis shall intimate to that effect in writing in advance about the off-season period during which energy consumption, if any, shall be mainly for overhauling of the plant and machinery. The total period of the off-season so declared and observed shall be not less than three calendar months in a calendar year.

(c) The total minimum amount under the head “Fixed and Energy Charges” payable by the seasonal consumer satisfying the eligibility criteria under sub-clause (a) above and complying with the provision stipulated under sub-clause (b) above shall be Rs.3000/- per annum per BHP of the contracted load for the installation having the contracted load upto 75 BHP, and Rs.4500/- per annum per BHP when contracted load is exceeding 75 BHP.

(d) The units consumed during the off-season period shall be charged for at a flat rate of 400 Paise per unit.

(e) The electricity bills related to the off-season period shall not be taken into account towards the amount payable against the annual minimum bill. The amount paid by the consumer towards the electricity bills related to the seasonal period only under the heads “Fixed Charges” and “Energy Charges”, shall be taken into account while determining the amount of short-fall payable towards the annual minimum bill as specified under sub-clause (c) above.

4.1 RATE LTP-II:

This tariff shall be applicable to educational institutions and research and development laboratories for motive power services where machines and appliances are primarily used for demonstration/research purposes only.

4.2.1 Energy Charges:

For all units consumed during the month	400 Paise per Unit

NOTE:

The educational institutions and research laboratories will have an option to select either of the rate LTP-I with minimum charges or rate LTP-II without minimum charges.

4.3 **RATE LTP-III:**

This tariff shall be applicable to consumers using electricity for motive power services for minimum contract demand of 40 KW and up to 80 KW at low voltage.

4.3.1 **Fixed charges:**

(a)	**For billing demand upto the contract demand**	
	(i) For first 40 KW of billing demand	Rs.60/- per KW per month
	(ii) Next 20 KW of billing demand	Rs.90/- per KW per month
	(iii) Above 60 KW of billing demand	Rs.150 per KW per month
(b)	**For billing demand in excess of the contract demand**	Rs.200 per KW

PLUS

4.3.2 Energy charges:

For the entire consumption during the month	395 Paise per Unit

PLUS

4.3.3 Reactive Energy Charges:

For all the reactive units (KVARH) drawn during the month	20 Paise per KVARH

4.3.3 **Billing Demand:**

The billing demand shall be highest of the following, rounded to the next full KW:

(a) Eighty-five percent of the contract demand
(b) Actual maximum demand registered during the month
(c) 40 KW

4.3.5 **Minimum Bill:**

Payment of demand charges every month based on the billing demand.

NOTE:

(i) This tariff shall be applicable if the consumer so opts to be charged in place of LTP-I Tariff.
(ii) Consumer has to provide metering system in the event when proper metering system is not provided by GEB.
(iii) In the event of actual maximum demand exceeds 85 KW more than three occasions during the period of six months, the consumer has to provide his distribution transformer at his cost and maintain at his cost.

4.4 RATE LTP-IV:

(This tariff is applicable for aggregate motive power load not exceeding 125 BHP and using electricity **exclusively during night hours** from 10.00 PM to 06.00 AM. The supply hours shall be regulated through time-switch to be provided by the consumer at his cost.)

4.4.1 Fixed Charges per month:

Thirty percent of the fixed charges specified in RATE LTP-I above.

PLUS

4.4.2 Energy Charges:

For entire consumption during the month	300 Paise per Unit

4.4.3 Reactive Energy Charges:

For contract load of 50 BHP and above: For all reactive units (KVARH) drawn during the month	20 Paise per KVARH

5.0 RATE WW:

This tariff shall be applicable to motive power services used for water works and sewerage pumping purposes.

5.1 Water works and sewerage pumps operated by other than local authority:

(a)	Fixed charges per month	Rs.15 per BHP
PLUS		
(b)	Energy charges per month: For entire consumption during the month	340 Paise per Unit

5.2 Water works and sewerage pumps operated by local authority other than Gram Panchayats and Gujarat Water Supply and Sewerage Board in Gram Panchayats:

(a)	Fixed charges per month	Rs.9 per BHP
PLUS		
(b)	Energy charges per month: For entire consumption during the month	320 Paise per Unit

5.3 Water works and sewerage pumps operated by Gram Panchayats or Gujarat Water Supply and Sewerage Board for its installations located in Gram Panchayats:

Energy charges per month: For entire consumption during the month	230 Paise/Unit

5.4 Water works and sewerage pumps operated by Nagar Panchayats:

Energy charges per month: For entire consumption during the month	260 Paise/unit

6.0 <u>RATE-AG (AGRICULTURAL)</u>:

This tariff is applicable to motive power services used for irrigation purposes only.

6.1 The rates for following group are as under:

6.1.1 <u>HP Based Tariff</u>:

(a)	For entire contracted load	Rs.140 per BHP per month

ALTERNATIVELY

6.1.2 <u>Metered Tariff:</u>

Fixed Charges	Rs.10 per BHP per month
Energy Charges: For entire consumption	50 Paise per Unit per month

6.1.3 **<u>Tatkal Scheme:</u>**

Fixed Charges	Rs.10 per BHP per month
Energy Charges For entire consumption	70 Paise per Unit per month

<u>NOTE:</u>

The consumers under Tatkal Scheme shall be eligible for normal metered tariff as above, on completion of five years period from the date of commencement of supply.

6.2 No machinery other than pump for irrigation of water will be permitted under this tariff. Any other machinery connected in the installation governed under this tariff shall be charged separately at appropriate tariff for which consumers shall have to take separate connection.

7.0 **<u>DELAYED</u>** PAYMENT CHARGES:

7.1 No delayed payment charges shall be levied if the bill is paid within ten days from the date of billing (excluding the date of billing).

7.2 Delayed payment charges will be levied at the rate of 2% per month or part thereof in case of consumer governed under Rate LFD-I, LFD-II, LFD-III, Rate LTP-I, LTP-II, LTP-III, LTP-IV and Rate WW and at the rate of 1% per month or part thereof for the consumer governed under Rate AG from the date of billing till the date of payment if the bill is paid after ten days from the date of billing.

7.3 For the purpose of levy of delayed payment charges, the bill means the entire amount of the electricity bill inclusive of meter charges, amount of electricity duty, tax on sale of electricity, etc.

8.0 **RATE TMP:**

This tariff is applicable to services for temporary supply at the low voltage.

8.1 **Energy Charges:**

8.1.1 For the supply used for the purposes stipulated in respective tariff for permanent supply:

(a)	Rate LFD-I (for residential premises)	Rs.425 per Unit
(b)	Rate LFD-II (for non-residential premises)	Rs.470 per Unit
(c)	Rate LFD-III (for educational and other institutions)	Rs.470 per Unit
(d)	Rate LTP-I, LTP-II and LTP-III	Rs.630 per unit

8.1.2 **Minimum charges:**

(a)	**For the purpose stipulated in LFD:**	Rs.20 per day
(b)	**For the purpose stipulated in Rate LTP-I**	Rs.200 per BHP per month
(c)	**For the purpose stipulated in Rate LTP-III**	Rs.225 per KW per month

NOTE: Payment of bill is to be made within seven days from the date of issue of the bill. Supply would be disconnected for non-payment of dues on 24 hours notice.

9.0 **RATE STREET LIGHTS:**

9.1 **Tariff for Street Light for Local Authorities and Industrial Estates:**

This tariff includes the provision of maintenance, operation and control of the street lighting system.

9.1.1 **Energy Charges:**

For all the units consumed during the month: For street lights operated by industrial estates and local authority	330 Paise per Unit

9.1.2 **Rebate:**

The rebate at **four paise per unit** consumed during the month shall be allowed, if switching "On" and "Off" operations are to be carried out by the consumer with the prior permission of GEB.

9.1.3 **Minimum Charges:**

The minimum energy consumption is prescribed for consumer with more than 50 street lights within a village or an industrial estate, as the case may be, as equivalent to 2200 units per annum per kilo watt of connected load during the year.

9.1.4 **Renewal and Replacements of Lamps:**

The consumer shall supply the necessary lamps of correct wattage for replacing the burnt out lamps and GEB shall arrange to replace those lamps on charging the consumer Re.1 per incandescent lamp.

9.2 **Tariff for power supply for street lighting purposes to consumers other than the local authorities and industrial estates:**

9.2.1 **Energy charges:**

For all units consumed during the month	330 Paise per KWH

9.2.2 Minimum Charges:

Rs.3 per month per fixture

9.2.3 **Renewal and Replacement of Lamps:**

The consumer shall arrange for renewal and replacement of lamp at his cost by person authorised by him in this behalf under Rule-3 of the Indian Electricity Rules, 1956.

9.2.4 **Maintenance other than Replacement of Lamps**:

Maintenance of the street lighting system shall be carried out by GEB.

PART-II

TARIFFS FOR SUPPLY OF ELECTRICITY AT HIGH TENSION (3.3 KV AND ABOVE, 3-PHASE 50 Cs), AND EXTRA HIGH TENSION

The following tariffs are available for supply at high tension for large power services for contract demand not less than 100 KVA

10. RATE HTP-I

For regular power supply for larger power service purposes not specified in rate HTP-II (A) and II (B)

11. RATE HTP-II (A)

For the purpose specified therein.

12. RATE HTP-II (B)

For the purposes specified therein.

13. RATE HTP-III

For supplying at high tension for temporary purposes and for contract load of not less than 100 KVA.

14. RATE HTP-IV

For using electricity exclusively during night hours.

15. **RATE RAILWAY TRACTION**

16. RATE EL-I (A) (Grid Tariff)
For Licensees and Sanction Holders

17. **RATE EL-I(B) (Grid Tariff**)

For non-generating licensees and sanction holders

10.0 **RATE HTP-I:**

This tariff will be applicable for supply of electricity to HT consumers contracted for 100 KVA and above for regular power supply and requiring the power supply for the purposes not specified in Rate HTP-II(A) and HTP-II(B).

10.1 **Demand Charges:**

10.1.1 **For billing demand upto contract demand:**

(a)	For first 500 KVA of billing demand	Rs.85 per KVA per month
(b)	For next 500 KVA of billing demand	Rs.120 per KVA per month
(c)	For next 1500 KVA of billing demand	Rs.180 per KVA per month
(d)	For next 2500 KVA of billing demand	Rs.205 per KVA per month
(e)	For billing demand in excess of 5000 KVA	Rs.215 per KVA per month

10.1.2 **For Billing Demand in Excess of Contract Demand:**

For billing demand in excess over the contract demand	Rs.335 per KVA per month

PLUS

10.2 Energy Charges:

For entire consumption during the month		
(a)	Upto 1000 KVA contract demand	380 Paise per Unit per Month
(b)	Above 1000 KVA contract demand	410 Paise per Unit per Month

PLUS

10.3 Time of Use Charges:

(These charges shall be levied from a consumer having contract demand or actual demand of 500 KVA and above):

For energy consumption during the two peak periods, viz., 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs	75 Paise per Unit

10.4 Billing Demand:

The billing demand shall be the highest of the following:

(a) Actual maximum demand established during the month
(b) Eighty-five percent of the contract demand
(c) One hundred KVA

10.5 Minimum Bills:

Payment of "demand charges" based on KVA of billing demand.

10.6 **Lighting and Non-Industrial Loads:**

The consumption of lights and fans and other non-industrial loads of the factory building as also the consumption of creche, laboratory, stores, time keeper's office, yards, watch and ward, first aid centres, and dispensaries during a month registered at the main meter on HT side shall be charged at the energy charges specified above.

10.7 **Power Factor:**

10.7.1 Power Factor Adjustment Charges:

(a) The power factor adjustment charges shall be levied at the rate of 1% on the total amount of electricity bills for the month under the head "Demand Charges" and "Energy Charges" for every 1% drop or part thereof in the average power factor during the month below 90% upto 85%.

(b) In addition to the above clause, for every 1% drop or part thereof in average power factor during the month below 85% at the rate of 2% on the total amount of electricity bill for that month under the head "Demand Charges" and "Energy Charges", will be charged.

10.7.2 **Power Factor Adjustment Rebate:**

If the average power factor of the consumer's installation in any month is above 95%, the consumer will be entitled to a rebate at the rate of 1% in excess of 95% power factor on the total amount of electricity bill for that month under the head "Demand Charges" and "Energy Charges", for every 1% rise or part thereof in the average power factor during the month above 95%.

10.8 Meter Charges:

The meter charges per month are chargeable at the rate of Rs.750 per meter.

10.9 **Electricity Duty and Tax on Sale of Electricity:**

Electricity Duty and tax on sales of electricity will be collected in accordance with the rates prescribed by the Government from time to time. The consumer shall make separate metering arrangement for segregation of energy consumption wherever necessary for the purpose of levying electricity duty at different rate.

10.10 **Maximum Demand and its Measurement:**

The maximum demand in KW or KVA, as the case may be, shall mean an average KW/KVA supplied during consecutive 30 minutes period of maximum use where such meter reading directly the maximum demand in KW/KVA have been provided.

10.11 **Contract Demand:**

The contract demand shall mean the maximum KW/KVA for the supply, of which the supplier undertakes to provide facilities from time to time.

10.12 **Rebate for Supply at EHV:**

On Energy charges:		**Rebate @**
(a)	If supply is availed at 33/66 KV	0.5%
(b)	If supply is availed at 132 KV and above	1.0%

10.13 Concession for Use of Electricity during Night Hours:

For the consumer eligible for using supply at any time during 24 hours, entire consumption shall be billed at the energy charges specified above. However, the energy consumed during night hours of 10.00 PM to 06.00 AM next morning (recorded by a polyphase meter operated through time-switch) as is in excess of one third of the total energy consumed during the month, shall be eligible for concession at the rate of 50 Paise per unit. The polyphase meter and time switch shall be procured and installed by the consumer at his cost and sealed by the GEB.

10.14 **Seasonal Consumers taking HT Supply**:

10.14.1 The expression, "Seasonal Consumer", shall mean a consumer who takes and uses power supply for ice factory, ice-candy machines, ginning and pressing factory, oil mill, rice mill, salt industry, sugar factory, khandsari, cold storage plants (including such plants in fishery industry), tapioca industries manufacturing starch, pumping load or irrigation or for such other industries as may be approved from time to time and who works only during a part of the year.

10.14.2A consumer, who desires to be billed for minimum charges on annual basis, shall intimate in writing in advance about the off-season during which energy consumption, if any, shall be mainly for overhauling of the plant and machinery. The off-season period at any time shall be a full calendar month/months. The total period of off-season so declared and observed shall be not less than three calendar months in a calendar year.

10.14.3 The total minimum amount under the head "Demand and Energy Charges" payable by a seasonal consumer satisfying the eligibility criteria under sub clause 10.14.1 above and complying with provisions stipulated under sub clauses 10.14.2 above shall be Rs.8500/- per annum per KVA of the billing demand.

10.14.4 **The billing demand shall be the highest of the following**:

The highest of the actual maximum demand registered during the calendar year.

(a) Eighty-five percent of the arithmetic average of contract demand during the year.
(b) One hundred KVA.

10.14.5 Units consumed during the off-season period shall be charged for at the flat rate of **415 Paise per unit**.

10.14.6 Electricity bills paid during off-season period shall not be taken into account towards the amount payable against the annual minimum bill. The amount paid by the consumer towards the electricity bills for seasonal period only under the heads "Demand Charges" and "Energy Charges" shall be taken into account while determining the amount payable towards the annual minimum bill.

10.15 DELAYED PAYMENT CHARGES:

10.15.1 No delayed payment charges if the bill is paid within ten days from the date of billing.

10.15.2 Delayed payment charges are payable at the rate of 30% per annum on Board charges and at the rate of 24% per annum on Government taxes from the date of billing till the date of payment, if the bill is paid after ten days from the date of billing.

For the purpose of levy of delayed payment charges, the “Board Charges” means the entire amount of electricity bill excluding the amount of electricity duty and tax on sale of electricity.

“Government Charges” means the amount of electricity duty and tax on sale of electricity.

11.0 **RATE HTP-II(A)**

Applicability: This tariff shall be applicable for supply of energy to HT consumers contracting for 100 KVA and above, requiring power supply for Railways (other than Railway Workshops chargeable under Rate HTP-I and Railway Traction), hotels, amusement parks, resorts, water parks military installations, aerodromes, cinemas, auditoriums, banks, studios, offices, film production, etc., requiring and given separate point of supply and such other establishments as may be approved from time to time.

11.1 **Demand Charges:**

a)	**For billing demand upto contract demand:**		
	i)	For first 1000 KVA of billing demand	Rs.150 per KVA per month
	ii)	For billing demand in excess of 1000 KVA	Rs.225 per KVA per month
b)	**For billing demand in excess of contract demand**		Rs.360 per KVA per month for billing demand in excess over the contract demand

PLUS

11.2 **Energy Charges:**

For all units consumed during the month	410 Paise per Unit

PLUS

11.3 **Time of Use Charges:**

(These charges shall be levied from a consumer having contract demand or actual demand of 500 KVA and above):

For energy consumption during the two peak periods, viz., 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs	75 Paise per Unit

11.4	Billing demand	Same as per HTP-I Tariff
11.5	Minimum bill	
11.6	Power factor adjustment charges	
11.7	Meter charges	
11.8	Electricity Duty and tax on sale of electricity	
11.9	Maximum demand and its measurement	
11.10	Contract demand	
11.11	Rebate for supply at EHV	
11.12	Delayed payment charges	

12.0 **RATE HTP-II(B):**

Applicability: This tariff shall be applicable for supply of energy to HT consumers contracting for 100 KVA and above, requiring power supply for residential colonies, townships, cantonments and educational institutions governed by the government, requiring and given separate point of supply.

12.1 **Demand Charges:**

(a) For entire billing demand	Rs.110 per KVA per month
(b) For billing demand in excess of contract demand	Rs.350 per KVA per month

PLUS

12.2 **Energy Charges:**

For all units consumed during the month	360 Paise per Unit

PLUS

12.3 Time of Use Charges:

These charges shall be levied on a consumer having contract demand or actual demand of 500 KVA and above:

For energy consumption during the two peak periods, viz., 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs	75 Paise per Unit

12.4	Billing Demand	Same as per HTP-I Tariff
12.5	Minimum Bill	
12.6	Power Factor Adjustment Charges	
12.7	Meter Charges	
12.8	Electricity Duty and Tax on Sale of Electricity	
12.9	Maximum Demand and its Measurement	
12.10	Contract Demand	
12.11	Rebate for supply at EHV	
12.12	Delayed Payment Charges	

13.0 **RATE HTP-III:**

This tariff shall be applicable to a consumer taking supply of electricity at high voltage, contracting for not less than 100 KVA for temporary period. A consumer not taking supply on regular basis under a proper agreement shall be deemed to be taking supply for temporary period.

13.1 **Demand Charges:**

For billing demand upto contract demand	Rs.400 per KVA per month
For billing demand in excess of contract demand	Rs.500 per KVA per month

PLUS

13.2 Energy Charges:

For all units consumed during the month	620 Paise per Unit

PLUS

13.3 Time of use charges:
(These charges be levied from the consumer who is having contracted demand or actual demand of 500 KVA and above).

Additional charge for the energy consumption during two peak periods, i.e., 07.00 Hrs to 11.00 Hrs and 18.00 Hrs to 22.00 Hrs.	75 Paise per Unit

13.4	Billing Demand:	Same as per HTP-I Tariff
13.5	Minimum Bill:	
13.6	Maximum demand and its measurement.	
13.7	Meter Charges:	
13.8	Electricity duty and tax on sale of electricity	
13.9	Contract demand	
13.10	Delayed payment charges	

14.0 **<u>RATE HTP-IV:</u>**

This tariff shall be applicable for supply of electricity to HT consumers contracted for 100 KVA and above for regular power supply and requiring the power supply for the purposes not specified in Rate HTP-II(A) and HTP-II(B); and consumer opting to use electricity **<u>exclusively</u>** during night hours from 10.00 PM to 06.00 AM next day.

<u>14.1 Demand Charges:</u>

Thirty percent of the demand charges specified in Rate HTP-I

PLUS

<u>14.2 Energy Charges:</u>

For all units consumed during the month	300 Paise per Unit

14.3	Billing demand	As per Rate HTP-I
14.4	Minimum bill	
14.5	Power factor adjustment charges	
14.6	Meter charges	
14.7	Electricity duty and tax on sale of electricity	
14.8	Maximum demand and its measurement	
14.9	Contract demand	
14.10	Rebate for supply EHV	
14.11	Delayed payment charges	

15.0 **RATE – RAILWAY TRACTION:**

This tariff is applicable for power supply to Railway Traction at 132 KV.

15.1 **Demand Charges:**

(a)	For billing demand upto the contract demand	Rs.160 per KVA per month
(b)	For billing demand in excess of contract demand	Rs.400 per KVA per month

***NOTE*: In case of the permitted load transfer by GEB for traction supply due to scheduled shutdown/emergency shutdown/ failure of supply at GEB sub-station, etc., excess demand over the contract demand shall be charged at normal rate at appropriate point of supply.**

PLUS

15.2 **Energy Charges:**

For all units consumed during the month	455 Paise per Unit

15.3 Meter charge
15.4 Billing Demand
15.5 Contract demand
15.6 Minimum bill
15.7 Maximum demand
15.8 Delayed payment charges
15.9 Power factor adjustment charges
15.10 Rebate for supply at EHV

$\Bigg\}$ As per HTP-I Tariff

16.0 **RATE EL-I (A) (GRID TARIFF):**

This tariff is applicable to licensees and sanction holders permitted to supply power to public.

16.1 **Demand Charges:**

(a)	For billing demand upto the contract demand	Rs.90 per KVA per month of billing demand
(b)	For billing demand in excess of the contract demand	Rs.300 per KVA per month

PLUS

16.2 **Energy charges:**

For all units consumed during the month	320 Paise per Unit

PLUS

16.3 **Time of Use Charges:**

Additional charge for the energy consumption during the two peak periods, i.e., 07.00 Hrs to 11.00 Hrs and 18.00 Hrs to 22.00 Hrs in respect of licensees/sanction holders having contract demand of 500 KVA and above.	40 Paise per Unit

16.4 **Billing Demand:**

The billing demand shall be the highest of the following:

16.4.1 Actual maximum demand established during the month.
16.4.2 Sixty percent of the contract demand

16.5 **Minimum Bill:**

Payment of demand charges based upon the KVA of billing demand.

16.6 **POWER FACTOR ADJUSTMENT:**

The licensee shall maintain an average power factor of not less than 85% in any month. Should the power factor drop below 0.85, it should be brought to this value as soon as desired by GEB by means of methods approved by the supplier, failing which the supply may be discontinued.

16.7 **METER CHARGE:**

The meter charge is chargeable at Rs.750/- per month for HT metering equipment.

16.8 **DELAYED PAYMENT CHARGES:**

16.8.1 No delayed payment charges, if the bill is paid within fifteen days from the date of billing.

16.8.2 Delayed payment charges are pay8able at the rate of 30% per annum from the date of billing till the date of payment, if the bill is paid after 15 days from the date of billing.

16.8.3 The above delayed payment charges does not take away the right of disconnecting the supply for non-payment of the bills, electricity duty and other charges due to GEB.

16.9 **CONTRACT DEMAND:**

Contract demand shall mean the maximum KW/KVA for the supply of which the supplier undertakes to provide facilities from time to time.

16.10 **MAXIMUM DEMAND**:

Maximum demand shall mean the average KW/KVA supplied during the consecutive 30 minutes period of maximum use.

17.0 **RATE EL-I (B) (Grid Tariff):**

This tariff is applicable to non-generating distributing licensees and sanction holders having aggregate contract demand of 100 MVA and above, and permitted to supply power to public:

17.1 Energy Charges:

For entire consumption during the month	270 Paise per Unit

17.1.1	Power factor adjustment	Same as per EL-I(A) (Grid Tariff)
17.2	Meter charges	
17.3	Delayed payment charges	
17.4	Contract demand	
17.6	Maximum Demand	