ANNEX-D1

TARIFF EFFECTIVE FROM Ist. FEBRUARY 2001

Sl. No.	Category of Consumers	Voltage of Supply	Demand Charge (Rs/KW)/ (Rs/KVA)	*Energy Charge (P/KWh)	Customer Service Charge (Rs./Month/Customer)	Monthly Minimum Fixed Charge for first KW or part (Rs.)	Monthly Fixed Charge for any additional KW or part (Rs.)	Rebate (P/KWh)
LT Category								
Domestic								
1	Kutir Jyoti < 30U/month	LT	FIXED MONTHLY CHARGE ---->			30		
	Others					20	10	10
2	(Consumption <= 100 units/month)	LT		140				
	(Consumption >100, <=200 units/month)	LT		230				
	(Consumption >200 units/month)	LT		320				
	Commercial					30	20	10
3	(Consumption <=100 units/month)	LT		320				
	(Consumption >100, <=300 units/month)	LT		410				
	(Consumption >300 units/month)	LT		450				
4	Irrigation	LT		110		20	10	10
5	Street Lighting	LT		320		20	10	DPS/Rebate
6	Small Industry	LT		320		40	30	10
7	Medium Industry	LT		320		80	50	DPS/Rebate
8	Public Institution	LT		320		80	50	DPS/Rebate
9	Public Water Works <100 kW	LT		320		80	50	DPS/Rebate
10	Public Water Works	LT	200	320	30			DPS/Rebate
11	General Purpose	LT	200	320	30			DPS/Rebate
12	Large Industry	LT	**200**	320	30			DPS/Rebate
HT Category								
13	Bulk Supply - Domestic	HT	10	230	250			10
14	Irrigation	HT	30	100	250			10

15	Public Institution	HT	50	300	250			DPS/Rebate
16	Commercial	HT	50	300	250			10
17	Medium Industry	HT	50	300	250			DPS/Rebate
18	General Purpose	HT	200	300	250			DPS/Rebate
19	Public Water Works	HT	200	300	250			DPS/Rebate
20	Large Industry	HT	200	300	250			DPS/Rebate
21	Power Intensive Industry	HT	200	300	250			DPS/Rebate
22	Ministeel Plant	HT	200	300	250			DPS/Rebate
23	Railway Traction	HT	200	300	250			DPS/Rebate
24	Colony Consumption	HT	0	230	0			DPS/Rebate
EHT Category								
25	General Purpose	EHT	200	290	700			DPS/Rebate
26	Large Industry	EHT	200	290	700			DPS/Rebate
27	Railway Traction	EHT	200	290	700			DPS/Rebate
28	Heavy Industry	EHT	200	290	700			DPS/Rebate
29	Power Intensive Industry	EHT	200	290	700			DPS/Rebate
30	Ministeel Plant	EHT	200	290	700			DPS/Rebate
31	Emerg. Supply to CPP	EHT	0	380	700			DPS/Rebate
32	Colony Consumption	EHT	0	230	0			DPS/Rebate
D.C. Services			RATE FOR D.C. SUPPLY					
33	Domestic	LT	SAME AS RATE AT SL. 2			20	10	10
34	Commercial	LT	SAME AS RATE AT SL. 3			30	20	10
35	Small Industry	LT	SAME AS RATE AT SL. 6			40	30	10
	* Consumption in excess of 50% and up to 60% by EHT and HT consumers shall be payable @180 paise/kwh							
	& 200 paise/kwh respectively and consumption above 60% by EHT & HT consumers shall be payable							
	@ 150 paise/kwh &170 paise/kwh respectively.							

CASE NO. 19 of 1998

Shri S.C. Mahalik, Chairman
Shri A. R. Mohanty, Member
Shri D. K. Roy, Member

In the matter of an application for revision of the Distribution & Retail Supply Tariff by Gridco.

Dates of argument : 14.10.98 to 17.10.98
Date of Order : 21.11.98

ORDER

M/s. Grid Corporation of Orissa Limited (Gridco, for short), the holder of the "The Distribution & Retail Supply Licence, 1997 (No.1/97)" have applied for approval of its calculation of revenue requirement and charges to be recovered for sale of electricity to consumers during 1998-99.

TABLE OF CONTENTS

1.2 The said licensee, Gridco has recently implemented a restructuring programme, creating four separate distribution zones to be managed by four subsidiary companies which have already been incorporated. As on date, Gridco is the only licensee covering the entire State of Orissa as its area of supply.

1.3 The proposal under sub-section (4) of Section 26 of the Reform Act, 1995 was submitted by Gridco on August 17, 1998 giving details of calculation of estimated revenue requirement for 1998-99 and charges proposed to be levied.

1.4 Upon Gridco meeting the clarifications sought for by the Commission office and complying with the procedural formalities, a notice was published by the Commission in several local newspapers on two consecutive days outlining the tariff proposal and calling for objections from interested persons. The objectors were required to submit their objections in quadruplicate to the Commission with the fifth copy of the said objection to be served on Gridco. The notice called on the interested parties to peruse further details of the proposal in the corporate office of Gridco so also at the head offices of the four distribution zones so as to enable them to submit their objections within thirty days from the date of publication of the notice in the daily newspapers. It also stipulated that objectors, if they so wished, could indicate their desire to be heard in person. A total of eighty eight objections were received against Gridco's proposal for Distribution & Retail Supply Tariff within the date line fixed i.e. 7th October, 1998. Out of the said eighty eight objections, fifty one objectors who fulfilled the stipulated conditions were admitted for personal hearing. Objections not admitted for personal hearing were also taken into consideration by the Commission.

1.5 Commission, after receiving the objections and admitting them for personal hearing as indicated above, published a notice in a number of English & Oriya dailies for two consecutive days informing the objectors as well as the public in general that the hearing on the proposal of Gridco for Distribution & Retail Supply Tariff would take place from 14th to 17th October, 1998.

1.6 As notified, the public hearing on the tariff proposal took place on the specified dates in the office of the Commission. The Reform Act, 1995 does not require the Commission to hold public hearing on tariff application. The Commission on its own however adopted the procedure of inviting objections from the interested persons and called for a hearing with a view to ascertain the views of a wide section of consumers and to ensure transparency, objectivity and public participation. During the hearing, Gridco as well as objectors were requested to confine themselves to issues relevant to the tariff proceedings so that the Commission could arrive at a just and proper decision.

1.7 At the outset of the hearing, Mr. K.N. Jena, Advocate appearing on behalf of M/s Orissa Consumers' Association, Cuttack raised certain preliminary objections and sought the Commission's orders before proceeding with the hearing.

1.8 Mr. Jena, raised the preliminary objections on the following grounds, praying, inter alia, rejection of the proposal of the Gridco for revision of the tariff structure:

> (a) Provisions under section 57-A of Electricity (Supply) Act, 1948 read with the provision of Reform Act, 1995 contemplate that charges for the supply of electricity, once fixed, shall be in operation for three years. As such, revision of tariff within three years would be without authority of law.
>
> (b) When persons other than Gridco or private entrepreneurs have not been granted licence, Gridco is not entitled to make provisions for them in anticipation. As such the application for revision is premature. Furthermore he alleged that the application seeks to defraud the consumers as companies which are being floated are fake companies, have no financial standing, have not paid up any share capital and have no bank account and infrastructure to carry on the business of distribution and supply. This is being done to cover up Gridco's inefficiency, maladministration and loss arising mainly due to extravagant expenditure.
>
> (c) Since the licensee has revised the tariff twice during the period 01.4.97 to this date, the present application is liable to be rejected.
>
> (d) Licensee has failed to comply with the conditions of licence. As such it should not be given any indulgence to revise the tariff until and unless it fulfills the conditions of licensee and complies with the order of the Commission.

1.9 The first objection refers to Section 57-A of Electricity (Supply) Act, 1948 and holds that the present charges of electricity effective from 01.04.97 should be in operation for 3 years. Mr. Jena in his oral submission referred to the provisions of sub-clause (c) and (e) of sub-section (1) of Section 57-A of Electricity (Supply) Act, 1948. These provisions are applicable only to charges for electricity recommended by a Rating Committee and approved by the State Govt. as per Section 57-A of Electricity (Supply) Act, 1948 and stipulate that such charges for supply of electricity shall be in operation for such period not exceeding three years as the State Govt. may specify in the order. Sub-section (7) of Section 26 of the Reform Act, 1995 annuls the constitution of a Rating Committee, making the above provisions of the Electricity (Supply) Act, 1948 inapplicable in this case. We hold that this preliminary objection by the learned counsel that the revision of tariff now proposed by the licensee is without authority of law is not correct.

1.10 The second objection raised by the learned counsel relates to premature submission of bulk supply tariff when persons other than Gridco or other entrepreneurs have not been granted licence. The Commission has carefully considered this issue. The Commission observes that the mandate of the Reform Act, 1995 is to provide for avenues for participation of private sector entrepreneurs in the electricity industry. Gridco, the holder of the Distribution & Retail Supply Licence, has already constituted four distribution zones and has incorporated four subsidiary companies corresponding to these zones with Gridco as the holding company. Further, the Gridco as the licensee for Distribution & Retail Supply has initiated action proposing the divestment of the shares of these subsidiary companies to private companies. Gridco's action in this regard is consistent with the Reform Act, 1995. Further, Gridco, the holder of Transmission & Bulk Supply Licence, has applied for a bulk supply tariff to coincide with the aforesaid action related to hiving off its distribution & retail supply business to different companies. As action taken by Gridco with regard to restructuring and functional unbundling are in pursuance of the objectives of the Act, 1995, Gridco cannot be faulted on these accounts. Further, these have no material bearing on Gridco's application for tariff amendment in respect of supply of energy to consumers and related charges. Whether the licensee distributes and supplies electricity directly or through four subsidiary companies, the revenue requirement and the tariff need scrutiny and approval of the Commission. Therefore, it is perfectly in order for Gridco, holding the licence for Distribution & Retail Supply, to file the revenue requirement and charges for supply of energy.

1.11 The third objection has not been amplified by the learned counsel. As there has been no tariff revision since 01.04.97 till date, the objection is devoid of any merit.

1.12 The fourth preliminary objection raised by the learned counsel relates to debarring the licensee from revising the tariff until and unless they fulfill the conditions of the licence and comply with the order of the Commission. The Commission observes that non-compliance of the licence conditions or inadequate compliance, if any, is a totally separate issue relating to monitoring of compliance of licence conditions by the Commission. It may have a bearing on the charges to be levied but as long as the licensee has obligation to serve, it has to realise charges. Elaborate provisions exist in the Reform Act, 1995 to deal with non-compliance or violation of licence conditions. The filing of revenue requirement is a statutory requirement of the licensee as provided in sub-section (4) of Section 26 of the Reform Act, 1995 and, therefore, this function must not be mixed up with other issues. On these grounds the Commission did not admit any of the preliminary objections raised by the learned counsel and ordered the proceeding to continue.

1.13 Before examining the Gridco's proposal one more procedural objection raised in the hearing may be examined by us at this stage. Mr. Indrajit Mohanty, Advocate, appearing on behalf of M/s Nalco raised a procedural objection. Quoting section 28 and 29 of the Act, 1995 he argued that the Commission should not only proceed under Section 26 of the Act, but after obtaining consultation under the said section it has to issue a proposed order on which reaction has to obtained and then only final order can be passed.

1.14 We have carefully considered the objection. We find that Section 29 of the Reform Act, 1995 is in Chapter IX of

the Act under the title "Commission's Power to Pass Orders And Enforce Decisions". The provisions of the Sections under this Chapter form an interconnected group and the scope of those provisions is defined by Sec.28(1). It runs as follows :

"Where the Commission is satisfied that a licensee is contravening, or is likely to contravene any relevant conditions or requirement of its licence, it shall by final order under section 29 and , if it thinks it appropriate in accordance with sub-section (2) by interim order under this section, issue such directions as it deems proper for securing compliance".

The orders contemplated under Section 29 or Sub-section (2) of Section 28 relate to contravention or likely contravention of any relevant conditions or requirement of the license and not to any other type of orders. An order setting tariff is not an order relating to contravention of a condition or requirement of a license. Section 29 is sequential to Section 28 and the words "final order" therein has the same denotation as the words "final order" in Section 28(1) - that is, an order in respect of contravention of a condition or requirement of a license.

1.15 Section 29 (1) (b) itself states that notice of the proposed "final order" shall set out information referred to in Sec.28(3)(b), namely, the relevant conditions or requirements (evidently of the license) with which the proposed order is intended to secure compliance; the acts or omissions which, in the opinion of the Commission, constitute contravention of that condition or requirement; other facts which would justify the proposed order and the effects of the proposed order. This conclusively suggests that the "final order" contemplated in Sec.29 is an order in respect of contravention of a license condition or requirement.

1.16 An order u/s 26 setting tariff is a regulatory order in discharge of the Commission's function under Sec.11(1) (e). The tariff-setting power under Chapter VIII is one form of regulation and license-enforcing power under Chapter IX is another form of regulation. They are distinct fields of regulation. The methods employed in each field are distinct. The Act deals with them in distinct Chapters. It is not permissible to take one provision out of its context from one Chapter and apply it in another Chapter dealing with a different form of regulation.

1.17 We therefore find that the objection raised by the learned Advocate Mr. Indrajit Mohanty is not valid.

2.0 GRIDCO'S PROPOSAL

2.1 The application filed by Gridco has given elaborate calculation of its revenue requirements and upward revision of the tariff approved by the Commission in its Order No.009 dated 12th March, 1997. The amendment to tariff is stated to be necessitated due to following reasons :

a) The revenue from existing tariff is not sufficient to meet costs properly incurred by Gridco.

b) The restructuring of the Gridco's distribution and retail supply business into four zones to be managed by four subsidiary companies has made it necessary to disaggregate revenue requirement on zonal basis.

c) The tariff structure inherited by Gridco is required to be redesigned keeping in view the objects of the Reform Act.

2.2 Gridco have proposed uniform retail tariff for all four zones, calculating the revenue requirement on the basis of embedded costs in accordance with the provision of the Sixth Schedule to the Electricity (Supply) Act, 1948.

2.3 The revenue requirement for the year 1997-98 has been estimated as Rs.2615 crores (including previous accumulated loss of Rs.543.1 crores). The revenue from existing tariff without the proposed revision is estimated as Rs.1646.2 crores. Gridco's estimate of revenue during 1997-98 on the basis of the existing tariff applicable for 8 months and revised tariff for 4 months (from 01.12.97) is Rs.1715.9 crores. The estimated revenue on the basis of the proposed revised tariff for a full year is estimated as Rs.1855.5 crores. During a full year, Gridco's proposal leaves a gap of Rs.216.5 crores. It is stated by Gridco that the gap is substantially accounted for by its outstanding subsidy claim of Rs.198.1 crores on the Govt. of Orissa.

2.4 Gridco have estimated the accumulated loss till the end of 1997-98 as Rs.543.1 crores, but have not proposed to cover this amount in the tariff revision proposals, as they have approached Govt. of Orissa to allow a "Special Appropriation" to cover the amount, as provided in the Sixth Schedule of the Electricity (Supply) Act, 1948.

2.5 Gridco estimate the cost of power purchase for 1998-99 as Rs.1276.2 crores, operational expenses as Rs.635.88 crores and return on Capital Base at Standard Rate of (10.5+5)% as Rs.159.87 crores. Power purchase from different sources is estimated at 10,814.97 MU corresponding to a sale of 6380 MU at an overall T & D loss level of 41%.

2.6 Gridco have proposed that the transmission charge of 40 paise per unit in the existing tariff may be retained for the use of its transmission system within the State. A composite Bulk Supply & Transmission tariff to be applied to the distribution licensees has been proposed as Rs.300 per KVA of recorded maximum demand per month plus 81.70 paise per Kwh of energy delivered.

2.7 Gridco have not proposed any change in categorisation of retail consumers. It has been proposed to introduce an optional tariff for power-intensive industries to provide incentive for such industries to avail Gridco supplies in preference to setting up their own Captive Power Plants.

2.8 The proposal also provides for several significant departures in the structure of tariff. Charges to all categories of

consumers are proposed to be unbundled into;

a) a Customer Service Charge to reflect cost incurred in metering, meter reading, billing and providing related customer services,

b) a Demand Charge to reflect a portion of the fixed cost of power purchase, and maintaining and developing the transmission and distribution system, and

c) an Energy Charge to reflect remainder of fixed costs, the variable cost of power purchase and system loss.

2.9 It is proposed by Gridco to discontinue the existing provision of Monthly Minimum Energy Charge with the introduction of a demand charge and a separate customer charge to recover the portion of fixed cost associated with providing supply. With provision of tariff across voltage levels, the provision of surcharge for supply at voltage other than that at which tariff is specified is proposed to be withdrawn. It is proposed to allow without penalty overdrawal beyond contract demand during off-peak hours upto 20% for EHT industries where TOU meters are provided. This facility is to be extended to HT industries once TOU meters are provided for them.

2.10 It is further proposed to provide an incentive at one fourth of the rate of penalty when power factor is maintained above 0.92. The existing provision of a separate rent for meters provided by the licensee is proposed to be withdrawn as costs associated with this are proposed to be recovered through the customer service charge. Consumers providing their own meters are proposed to be given an appropriate reduction in the customer service charge.

2.11 It has been stated that Gridco have carried out a survey through Revenue Improvement Action Plan (RIAP). The survey indicates that load factor billing for defective meters and unmetered supply constitute a substantial proportion of LT supply, and that actual load factors in such cases are substantially higher than those prescribed in the present tariff. This provides an incentive for consumers not to have their defective meters rectified. Gridco have urged the Commission to approve adoption of load factors higher than those specified in the present tariff and much higher than the findings in the survey to provide correct incentives for adoption of metering by consumers.

2.12 Gridco have submitted a formula for fuel and power purchase cost adjustment.

2.13 Consultation with the Commission Advisory Committee :
Gridco's proposal on Distribution and Retail Supply Tariff was discussed in the Commission Advisory Committee meeting held on 8.10.98 for this purpose and the views expressed by the members of the Committee have been taken into consideration by the Commission in this order.

3.0 OBJECTIONS DURING HEARING

3.1 As stated earlier fiftyone objectors were admitted for personal hearing. The objectors have raised vital issues and have enlightened the Commission with many useful suggestions in various areas of concern. At the same time, it is noted that several objections raised are not relevant to the tariff proceedings.

3.2 Commission has taken note of the almost universal complaint regarding poor quality of supply and poor consumer services. While it is not possible to deal with these concerns effectively while dealing with tariff revision proposals under Section 26 of the Reform Act, 1995, Commission takes note of them for evolving effective methods for encouraging Gridco to move more rapidly towards functioning in an efficient, economic and competitive manner.

3.4 As had been observed in Commission Order No.009 of the 12th March'97, (on Gridco's tariff application for 1997-98), objections with regard to the reform, restructuring and privatisation programme, various aspects of revaluation of assets on transfer to Gridco & OHPC are beyond the scope of this Commission since they hinge on public policy and legislation.

3.5 Many of the issues raised by the objectors such as classification of consumer categories, security deposits, interest on security deposits, etc. although related to tariff, are more relevant to the Distribution (Conditions of Supply) Code whose modification and amendment have to be considered separately. We do not, therefore, intend to deal with them in this order.

3.6 Objections have been raised by industries which are sick or potentially sick or covered by BIFR awards, or which seek protection, concessions and special treatment. This was also dealt in Commission's order on Gridco's proposal for 1997-98 tariff amendments. Gridco as an independent corporate entity is neither expected nor is capable of taking care of socio-economic policies and programms of the Govt. except with regard to electricity. It is mandated to be run with efficiency and economy to deliver safe, reliable and economic power supply. It is bound by law to arrange its affairs so as to realise cost of supply and earn reasonable return. It cannot take care of the financial interests of the users. The objectors have to address the issues of concession and protection etc. to the Govt. who may issue policy directives in accordance with its socio-economic objectives. Hence we do not consider it necessary to deal with objections pleading for concession, special treatment and subsidy by Gridco.

3.7 Other important issues raised in the objections may be indicated below before our observations and findings are given on the same.

3.7.1 **Revenue Requirement :**

3.7.1.2 Gridco have projected a rather high T&D loss resulting in larger quantum of power purchase from costlier sources. T&D loss reduction is not in compliance with Commission order for 1997-98 tariff.
3.7.1.3 Power purchases has not been optimised. Cheaper power from hydro stations and CPPs should be maximised and drawal of costlier EREB power reduced.
3.7.1.4 Capital base has been increased from Rs.523 crores in 1997-98 to Rs.1031 crores in 1998-99. Lower valuation of assets by the Gridco's chartered valuers should have been used.
3.7.1.5 Subsidies due from the Government should be realised and the revenue gap on this account should not be allowed to have impact on revenue requirement.
3.7.1.6 Previous losses should not be considered for the present revenue requirement.
3.7.1.7 Depreciation should not be charged on revalued used assets at Govt. of India notified rates. Only assets created after 01.04.96 should be allowed for depreciation based on book values in asset register.
3.7.1.8 O&M expenses have increased substantially over previous year.

3.7.2 **Non - industrial (LT) category, e.g.**
Domestic, Commercial, Street Light, Agriculture, Public Institution etc.
3.7.2.1 The following objectors put forth objections and observations in respect of rate of tariff proposed for domestic, commercial and agricultural consumers as also with regard to categories of street light and public institutions:

1. United Hatchery Pvt. ltd., Jagamara, Khandagiri, Bhubaneswar.
2. Dr. Atul Krushna Mohanty, S.C.B. Medical College, Cuttack.
3. General Secretary. District Biju Janata Dal, Sambalpur.
4. Jt. Secretary, Federation of Consumer Organisations, Budhanagar, Bhubaneswar.
5. Er. Amarendra Pradhan, Angul.
6. President, Koel Nagar Welfare Association, Rourkela.
7. Orissa Consumers Assn., Biswanath lane, Cuttack.
8. President, The Nayapalli Community care Assn., Bhubaneswar.
9. Mr. P. K. Mishra, Old Bhubaneswar.
10. President, Orissa Grahak Mahasangha, Jatni, Khurda
11. Er. B.N. Das, Bhubaneswar.
12. Utkal Chamber of Commerce & Industry Limited, Cuttack.
13. Secy. Aska Chamber of Commerce, Aska, Ganjam
14. Confederation of Indian Industry, Bhubaneswar.
15. Er. Dhaneswar Dhal, Bhubaneswar and Er. R.P. Mohapatra.
16. Mr. C. S. Sastry, Cuttack
17. Er. R.C. Padhi, Bhubaneswar
18. Secy. The Senior consultant & Adviser Group, Bhubaneswar
19. Mr. B. K. Mohapatra, Cuttack
20. Prof. N.C. Sahu, Rourkela

The objections are summarised below :

a. While withdrawal of monthly minimum charge is welcome, imposition of Demand Charge and Customer Service Charge is not appropriate for the LT consumers as this will be a serious burden.
b. Load Factor billing when meter is defective or for unmetered supply is not appropriate in view of provision of Section 26 of I.E. Act, 1910. Gridco's load assessment is arbitrary and does not recognise use of energy saving appliances or infrequently used outlets. Meters are not being promptly replaced/repaired by Gridco even when consumers report them as defective.
c. The rates proposed will mean small LT consumers pay higher per unit charges compared to large consumers.
d. Cheaper hydro power should be earmarked for LT consumers and cross subsidisation

should continue considering the paying capacity of consumers.

e. Gridco should provide rebate to consumers for periods of low voltage, interruption and poor service.
f. Proposed new connection charge is arbitrarily high.
g. Temporary connection charge proposed is too high considering that the consumer supplies all material.
h. Charging for line extensions is not as per Distribution Code.

3.7.2.2 **LT Industries : (Small/Medium)**
Objections and observations were made in respect of tariff proposals for small and medium industries by the following objectors :

1. District Small Scale Industry Assn., Koraput, Jaypore.
2. Orissa Young Entrepreneurs Assn., Cuttack.
3. Orissa Assembly of Small & Medium Industry, Rayagada.
4. Orissa Assembly of Small & Medium Industry, Cuttack.
5. Confederation of Indian Industry, Bhubaneswar.
6. Keonjhar District Small Scale Ind. Assn., Barbil.
7. Orissa Small Scale Ind. Assn., Cuttack
8. Dist Small Scale Ind Assn., Cuttack.
9. Jaypore Motor Garage Owner Assn., Jaypore.

The objections are summarised below :

a. Rates proposed for Small & Medium Industries are too high and hence they will affect the financial viability these industries.
b. Imposition of Demand Charges on LT industries is not appropriate.
c. There should be no charge when no power is drawn during disconnection.
d. There should be no load factor billing for Small Scale Industries because of Gridco's failure to replace defective meters. Load factor billing is also illegal.
e. Time of Use tariff should be introduced for medium & small scale industries also.
f. There should be no penalty for overdrawal as there is no demand metering for small & medium Industries.
g. There should be a provision of rebate for timely payment as there is a surcharge for delayed payment.
h. Industries should be reclassified with Small Industries upto 99 KW and medium Industries upto 500 KW.
i. There should be no Delayed Payment Surcharge or power factor penalty for medium industries.
j. In the absence of demand metering, demand should be calculated on the average of energy consumed.

3.7.2.3 **HT/EHT Industries**
Objections and observations were made in respect of tariff proposals for HT/EHT industries by the following objectors :

1. Larsen & Toubro
2. Jayashree Chemicals
3. Konark Jute Mills
4. Steel Authority of India Ltd.
5. Kalinga Iron Works

6. Orient Paper Mills
7. Aditya Aluminium
8. IPISTEEL
9. Confederation of Indian Industries
10. Nilachal Ispat Nigam Ltd.
11. JK Corporation
12. Sonepur Spinning Mill
13. Mr. Narottam Das
14. Western Orissa Sugar Mill
15. FACOR
16. Ispat Alloys
17. TISCO
18. Nava Bharat Ferro Alloys

The objections are summarised below :

a. HT tariff rate should be the same as EHT tariff rate.
b. Rebate should be allowed for payments made before due date.
c. Security deposit should not be enhanced with every tariff revision.
d. Incentives for improved power factors over that prescribed should be at the same rate as the penalty for power factor lower than that prescribed. The prescribed limit should be reduced to 85% from the present 90%.
e. There should be no overdrawal penalty during off-peak periods.
f. Energy allowed for consumption in industrial colony should not be restricted to 10% of total consumption.
g. Demand charge should not be enhanced as this would make the rate higher than in other States.
h. The load factor for the proposed incentive tariff should be reduced from 60% to 40%. This tariff should also be applicable to large industries and heavy industries.
i. The arrangement for supplying NTPC power to EOUs should continue.
j. There should not be any load factor billing in case of defective meters.
k. Monthly demand charge should be on actual demand and not on 80% of contract demand.
l. Tariff should provide for rebate to consumers for period of over-frequency.

3.7.5 **Industries with CPPs**
With regard to industries having Captive Power Plants, objections were raised and suggestions were made by M/s NALCO, M/s ICCL, M/s INDAL, M/s Aditya Aluminium and also by Bhubaneswar Chapter of Confederation of Indian Industry.

On merits of tariff proposal, all the objectors pointed out that the rate of back-up power for CPPs is discriminatory and is unreasonably high. Further common points of objections were that only incremental cost should be charged for emergency power supply and that there should be no power factor penalty during periods of high system voltage.

Mr. Indrajit Mohanty, learned advocate, representing of M/s Nalco stated that M/s Gridco was not justified in ignoring the increased cost of fuel and pay only 77 paise per unit towards cost of CPP power. It was urged that M/s Gridco should be asked to honour the special agreement of June'94 which provided that while emergency supplies are to be charged by M/s Gridco at three times of M/s Nalco's supply rate, there would be no further charge towards wheeling, transmission loss, demand charges etc.

Mr. S. K. Tamotia, Chairman-cum-Managing Director of M/s Aditya Aluminium raised some general issues as well as issues on tariff for CPPs, special treatment for construction industry, transmission charges and domestic rates. The main objections relevant for the present proceeding raised by Mr. Tamotia relate to adverse impact of high power cost in general and on CPP owners in particular on capital cost of industries and on the industrial climate of the state. He

suggested settlement between Gridco and CPP on net exchange basis, non-discriminatory energy charge for CPPs, lower demand charge and single part tariff for construction industry.

3.7.6 **Railway Traction**
The Chief Electrical Distribution Engineer of South Eastern Railway representing Indian Railways urged that railway traction being a public utility should receive special consideration for the tariff which is already too high and hence should be reduced. He further urged that the tariff for supplies at 25 KV should be same as that at 132 KV, demand should be assessed on half hour basis and not on 15 minutes basis, billing for maximum demand should be on the basis of integrated simultaneous maximum demand for a section and not at each supply point and that the railway traction tariff should not be higher than the industrial tariff.

3.7.7 **Investors**
Mr. N.K. Gupta, DGM, Tata Hydro Electrical Power Limited Company wanted to be heard on behalf of the investors. He stated that in the interest of achieving the objectives of Reform Act, the apprehension of investors should be taken into account by the Commission and right signals should be given in the tariff judgment ensuring adequate rate of return. He invited attention of the Commission to the Schedule VI of Electricity (Supply) Act, 1948 and pleaded that linking rate of return to the lending rate of Reserve Bank of India brings in an element of uncertainty which should be avoided. In view of the volatile economic condition in a developing country, the rate of return should be delinked from the bank rate and the Commission should declare a fixed rate of return of 18% or more for the utility.

4.0 GRIDCO'S REPLY TO THE OBJECTIONS

4.1 Mr. B.C. Jena, Chairman-cum-Managing Director, Gridco replied to the various issues raised by the objectors. He categorised the objections broadly as follows :-

a. relating to the degree of compliance with statutory provisions and directives of the OERC.
b. relating to the calculation of the revenue requirement.
c. relating to the assessment of revenue.
d. relating to the proposed tariff design and level of the proposed tariffs and charges.
e. miscellaneous objections
f. objections unrelated to the present filing.

4.2 Statutory Compliance
4.2.1 On the problem of high frequency in the system, he explained that due to inadequate evacuation facility of surplus power from the Eastern Region, the entire region is suffering from high frequency in the grid. Remedy of the problem is beyond the control of Gridco but Gridco has initiated discussions for better grid discipline.
4.2.2 He submitted that due to inadequate investment in the past, there are interruptions in the power supply and the situation is being attended through appropriate investment for which investment programmes have been submitted.
4.2.3 To the objection about noncompliance like delay in the issue of Regulations, Distribution Code and Performance Standards, he informed that Gridco's proposals have been submitted for approval of the Commission.
4.2.4 On the allegation that Gridco have failed to implement the OERC directives he stated that Gridco faces major constraints and the effort made by Gridco to comply with the directives of the OERC have to be viewed in this context. Gridco have substantially improved the information supplied in the tariff proposal of 1998-99.
4.2.5 On the issue of non submission of Audited Accounts for 1997-98, he stated that there has been significant improvement over the past year. The management accounts for 1997-98 have been included as a part of the tariff filing and the Audited Accounts would be available by the end of the year.
4.2.6 To the objectors' complaint that the system loss target of 35% set by OERC for 1997-98 has not been achieved, he pointed out that despite constraints, the extent of reduction in system loss by end of the current year would be 8.5% over previous year actual loss of 49%. He stated that the base figure of loss had been earlier wrongly shown at 46% and hence there is a misleading impression that there has been no significant reduction in loss.
4.2.7 To the complaint of the objectors that Gridco have not been able to control the administrative costs and interest burden, he submitted that the employees cost, other expenses and interest have declined per unit of sale of energy over the past year.

4.3 Revenue Requirement
4.3.1 Some of the objectors have stated that Gridco is mis-representing the transmission loss by giving mis-leading data so much so that as against the actual transmission loss of 3.82%. Gridco is calculating it at 5.3%. It was explained by the CMD that by calculating the transmission loss on the net basis, the loss is 5.3%.
4.3.2 On the issue of subsidy to be claimed from State Govt., he submitted that Rs. 198.1 Crores has been claimed towards subsidy from the Govt. for 1997-98. No subsidy has been claimed for the year 1998-99. The Govt. of Orissa have not yet approved these claims for subsidy. Even if these claims are approved, the subsidy received will go towards receivables.
4.3.3 To the question that the asset valuation is arbitrary, he replied that the value of asset has been based on the asset valuation reflected in the Transfer Scheme which has been accepted by the OERC.

4.3.4 On the issue raised by the objectors that depreciation is not being charged as per Electricity (Supply) Act 1948, he submitted that the depreciation has been charged as per the appropriate Notification dated 29th March, 1994 of the Govt. of India.
4.3.5 To the question of increase of capital base from Rs.523 Crores in 1997-98 to Rs.1031 Crores in 1998-99 without investment, he submitted that during the year 1998-99, Rs.425.32 Crores is proposed for addition to the fixed assets. Besides, he submitted that Gridco has moved the Government of Orissa for the conversion of Govt. loan to equity.
4.3.6 On the next issue that the cost of purchase of power would be lower if Gridco adopted the principle of merit order dispatch, he submitted that variations from the scheduled drawal do occur for reasons beyond the control of Gridco such as reduced availability of hydro power due to hydrological failure and high frequency in the Eastern Region putting constraints in drawal of power from CPPs.
4.3.7 On the issue that CPPs should be encouraged to supply more energy to reduce the cost of purchase of power, he submitted that the power availability from the CPPs is infirm in nature. He stated that induction of progressively higher volume of infirm power and associated backing down of the plants where the utility has to pay the fixed cost of generation will be financially adverse for the utility. Therefore, CPP power can be considered cheaper only if the cost is less than the highest available variable cost of the plants connected to the grid.

4.4 Assessment of Revenue

Some of the objectors had stated that the proposed high load factor for consumers with defective meters and unmetered supply would increase the billing figure leading to reduction of the estimated T&D loss. To these, he clarified that the estimated system loss of 41% is contingent on the approval of higher load factor from December, 1998 onwards.

4.5 Tariff Design

4.5.1 To the issue raised by the industries that the cross-subsidy should be reduced as they were not in a position to bear the cross-subsidy, he replied that the proposed EHT tariff has stagnated in nominal terms and the rise is nominal for HT consumers.
4.5.2 On the issue that the increase in demand charge of Rs.200/- to Rs.300/- per KVA per month will impose excessive burden on the industries he clarified that the demand charge is based on the fixed cost associated with meeting the power demand of the customers. With proposed withdrawal of minimum energy charge and decrease in the rates of energy charge, the proposed increase in demand charge would be completely offset and shall pose no significant additional burden on these consumers.
4.5.3 On the issue that the demand charge for HT and EHT industries are more than the demand charge for LT industries, he clarified that while the demand charge for LT consumers is based on the contract demand, in case of HT & EHT consumers the same is being billed on the basis of the recorded demand.
4.5.4 Some objectors had raised the issue that the levy of demand charge on small consumers was burdensome and would adversely affect the small industries, Shri Jena said that the introduction of demand charge would not increase the burden as the minimum energy charge payable by the consumers was being withdrawn. He further clarified that the demand charge on these classes of customers has been kept very low in comparison to the demand charge for large industries.
4.5.5 On the issue that there should be no distinction between the tariffs of EHT & HT supply, he justified the necessity of a separate tariff due to the difference in the cost of supply.
4.5.6 Some of the objectors had raised the issue that Gridco's tariff was high compared to other States. Shri Jena clarified that the variations in tariff were on account of high cost of power purchase, consumer profile and the investment required for growth. He stated that Gridco's tariff was comparable to that of Maharashtra, Karnataka and Haryana.
4.5.7 Some of the objectors had raised the issue that the reduction of slabs in the domestic category would hit the small consumers most. He replied that this was a necessity and a part of tariff reform. He submitted that the proposed increase was 47% for rural consumers and 20% for urban consumers with an average consumption level of 182 units per KW per month and 270 units per KW per month respectively.
4.5.8 Some of the objectors had said that the proposed load factor billing was unreasonable. He emphasised that the proposed high load factor was not a revenue earning device alone. This was primarily intended to remove the existing incentive for preferring unmetered billing.
4.5.9 To the question that the transmission tariff of Gridco is too high compared to the transmission charge of PGCIL, the CMD replied that the lines of PGCIL operate at higher voltage like 400 KV and 220 KV which results in lower losses. The PGCIL system consists of longer lines and fewer sub-stations.
4.5.10 The calculation per unit of transmission charge in case of PGCIL is done on the assumption that the entire energy despatched from the central generating station is being transmitted through the PGCIL system. In reality a part of PGCIL generation is transmitted through the lines of other constituents. As regards the lower rate being applied for transmission of power to APSEB and MPSEB, he pointed out that the wheeling of such power is necessary for export of surplus power from the region to raise the load factor of the central generating stations. Operating central station at high load factor results in economy to Gridco.
4.5.11 To the objectors issue that the distribution of cost between peak and off-peak loads may provide the true average cost of transmission rather than the calculation of the marginal cost on peak load he replied that the derivation of average cost is a concept derived from the method of calculation on embedded or average cost basis. The same methodology cannot be applied for calculation of costs at peak and off-peak on marginal cost basis.
4.5.12 Some objectors had said that there should be no penalty for overdrawal during off-peak. If a penalty is imposed the limit for overdrawal without penalty should be increased. To this he replied that the limit of overdrawal at 120% of the contract demand is meant for application to a select group of industries at EHT were facility of appropriate metering

is available. Allowing overdrawal without off-peak may pose a problem to the system stability and security. With no restriction on overdrawal the usefulness of agreement for contract demand will be lost and the utility may not be in a position to estimate the power requirements at a future date.
4.5.13 Some of the objectors had stated that there is no justification for giving power factor incentive at only 1/4th of the rate of penalty. The incentive should be equal to the penalty. The incentive should start from 0.9 instead of above 0.92. To this he replied that the penalty is intended to motivate large customers to maintain power factor at the required level. The incentive proposed will offset the extra expenditure incurred by them. Provision of incentive at a power factor above 92% serves as a bench mark and has to be treated differently from that of the levy of a penalty.
4.5.14 To the question of stipulation of minimum energy consumption being reduced to 25% to 30% in stead of the proposed 60% as proposed for the Power Incentive (optional category), he replied that the proposed load factor of 60% would be calculated annually. Therefore industries running at a load factor much below 60% can still avail the benefit if high load factor is attained in other months of the year. To the question that the energy charges for power intensive industries should be reduced and should be equal to the cost of energy, he replied that the issue is related to the cross-subsidisation by EHT and HT consumers to LT consumers which has to be rectified over a period of time. To benefit the power intensive industries, reduction of rate has already been proposed by Gridco.
4.5.15 **Miscellaneous Objections** : To the issue of raising the limit of 120% of the contract load for exemption of overdrawal by the Railways, he pointed out that in the absence of appropriate metering facility for the Railway Traction, this facility cannot be extended. This facility is for the present being proposed only in respect of the EHT industries.
4.5.16 To the question of the Railways that no tariff has been proposed for supply to them at 25 KV, the CMD clarified that the tariff at HT would apply to the supply at 25 KV. It would not be appropriate to have one tariff for supply at 25 KV and another at 132 KV due to difference in cost of supply.
4.5.17 To the question raised by L&T that the concessional rate of supply of power to industrial colonies should apply without limit, he clarified that the present limit of 10% of the total supply for residential colonies should be adequate as the industries are all large consumers of energy.

5.0 COMMISSION'S ANALYSIS AND DECISION ON GRIDCO'S PROPOSAL

5.1 In order to determine the revenue requirement of the licensee on the basis of which the Retail Supply Tariff is to be approved, the Commission has analysed the components of the licensee's costs. These are discussed below:
5.1.1 **Volume of Power Purchase**

a. The Orissa Electricity Regulatory Commission in its order on tariff for the year 1997-98 had approved a net sale volume of 6091 million units corresponding to power purchase of 9371 million units on the basis of T&D loss of 35%. This purchase did not include NTPC power for supply to the 100% export oriented units (EOU) and 95 MU for back up supply to ICCL. Taken together, the total sale for the year 1997-98 approved by the Commission was 6380 (6091+194+95) million units corresponding to 9815 MU of purchase.
b. Gridco have estimated that the energy sale during the year 1998-99 will be 940 million units more than the actual sale of 5440 MU during 1997-98. This increase has been attributed to an increase of 339 MU or about 6% in demand on account of load growth over the previous year and about 601 million unit on account of expected reduction in losses. Thus Gridco's estimated sale for the year 1998-99 is projected as 6380 (5440+940) million units.
c. The Commission, after taking into consideration the proposed increased sale of 339 million units on account of load growth over the approved sale figure of 6091 million units for the year 1997-98, estimates the sale for the current financial year (98-99) as (6091+339) 6430 million units excluding NTPC power to be wheeled to Export Oriented Units. This sale figure includes increase in billing on account of reduction in commercial losses. In other words, it includes the conversion of lost units to billing units due to improvement in billing and revenue collection.
d. The Commission, while approving the tariff for the financial year 1997-98, had considered the T&D loss level of 35% as reasonable and appropriate. The Commission had expected Gridco to devise its management strategy with the foremost objective of achieving rapid reduction in the T&D loss level. The Commission while adhering to earlier loss figure of 35%, reiterates that Gridco must continue to take all possible steps for reduction of T&D losses for the current year to the earlier benchmarked level of 35%. On this basis, a projected sale value of 6430 million units, Gridco may have to purchase 9891.39 million units. To meet the estimated sale of 194 million units to the export oriented units with EHT loss of 4% (194/0.96MU) 202 MU of additional power may have to be purchased. Therefore, the total requirement of power purchase will be 10093.47 million units.

Gridco, in its tariff proposal for the year 1997-98, had estimated a purchase of 11000 million units from the various sources, but as per the actuals for the year 1997-98 the total purchase was 10357 million units. This was 643 million unit less than what was projected by Gridco. The current year's projection by Gridco is 10814 million units at a loss level of 41%. Taking into account the estimates and the actuals for the year 1997-98, the Commission considers the estimates of purchase for the current year as an over estimation. The purchase of power may, therefore, be limited to 10093 million units, inclusive of the power requirement of the 100% export oriented units. This is summarized as follows :-

		Tariff proposal of Gridco for	**Approval by the Commission**

		1997-98 (in MU)	(in MU)
i.	Quantum of power purchase	11000	9815
ii.	Quantum of total sale	6380	6380
iii.	Sale to 100% EOU included in (ii) above	194	194
iv.	Sale to ICCL as back up power included in (ii) above	95	95
v.	Quantum of sale to consumers other than 100% EOU & back up power supply to ICCL(ii-iii-iv)	6091	6091

Performance of Gridco for 1997-98
Quantum of power purchase 10357.29 MU
Quantum of total sale 5439.6 MU

		Tariff proposal of Gridco for 1998-99 (in MU)	Approval by the Commission (in MU)
i.	Quantum of power purchase	10814	10093
ii.	Quantum of total sale projected	6380	6430+194=6624
iii.	Sale to 100% EOU included in (ii)	Nil	194
iv.	Sale to consumers other than 100% EOU (assuming a sale of 194MU to EOU based on the projection of 97-98 but not reported by Gridco)	6186	6430
v.	Assumption of T&D loss	41%	35%

5.1.2 Gridco has proposed a total sale volume of 6380 million units for the year 1998-99. If the sale to 100% EOU estimated at the previous year level of 194 million units is deducted then the sale figure of Gridco will be modified to (6380-194) 6186 million units. As against this Commission has approved a sale of 6430 million units excluding 100% EOU.

5.1.3 The additional sale now estimated by the Commission should be achieved by Gridco through loss reduction measures and enhanced billing to consumers with defective meters and unmetered supply for whom a higher load factor is being approved by the Commission. A categorywise comparison of sale figures proposed by Gridco and approved by the Commission for the year 1998-99 is given in Annex-E.

6.0 EXPENDITURE OF GRIDCO IN DISTRIBUTION & RETAIL SUPPLY

6.1 Cost of Purchase of Power : The Distribution & Retail Supply Licensee has to procure 9495.73 MU from the bulk supplier at the Commission's approved rate of Rs.200/KVA/month + 85.5 paise per unit. The total cost of power purchase works out to Rs.1282.47 crores. It is clarified that even though supply of NTPC power to the EOUs shall be routed through the distribution companies, revenue received from the same shall be payable to Transmission and Bulk Supply Licensee.

6.2 Expenditure on distribution and supply : The expenditure of distribution and retail supply may be considered under following heads :

a. Employees cost
b. Material cost
c. Administrative and general expenses
d. Less expenses capitalised

These are discussed below :

(a) Employees Cost : The expenses chargeable to Operation and Maintenance for transmission and distribution taken together on account of the employees cost for the year 1998-99 is estimated by Gridco at Rs.264.79 crores. These expenses include impact of revision of wages and terminal benefits. The impact of revision of wages and terminal benefits together amounts to Rs.24.12 crores. Thus, Employees Cost excluding the impact of revision of pay and terminal benefit works out to Rs.240.67 crores. Corresponding figure for 1997-98 as approved by the Commission was Rs.214.34 crores. The Employees Cost of Gridco as per the audited accounts of 1996-97 was Rs.202.58 crores. With an upward adjustment of 3% and 6% towards normal annual increment and inflation respectively, the Employees Cost works out Rs.240.67 crores for the year 1998-99. Keeping in view the wage revision impact of Rs.24.12 crores, a sum of Rs.264.79 crores claimed by the licensee is found reasonable. Out of Rs.264.79 crores, Rs.207.21 crores

has been allocated to the Distribution and Retail Supply Business.

For calculating employees cost, no additional man power has been assumed by Gridco. The commonly used indicators for man power utilisation are No. of employees per MKwh sold & No. of employees per 1000 consumers. A comparative statement with All India average is given below :

Number of employees per thousand consumers :
(i) All India average - 12 (Compiled upto end of 1995)
(ii) Gridco - 24.82 or 25 (Compiled upto end of 1998)

Number of employees per MKwh of electricity sold :
(i) All India average- 3.9 or 4 (Compiled upto end of 1995)
(ii) Gridco- 4.9 or 5 (Compiled upto end of 1998)

It is apparent that Gridco requires substantial growth in number of consumers and sale to be at par with the all India norms.

(b) Maintenance Cost : This is the cost of materials/spares required for maintenance of lines and substations. Gridco have estimated the material cost at Rs.80.25 crores for 1998-99 for both transmission and distribution. It is assumed by the licensee that it will spend approximately 4% of value of average assets for maintenance of lines & substations (RTCL - 13).

World Bank in their observation (Staff Appraisal Report on Orissa Power Sector Restructuring Project, April 1996) have assumed 5% of average fixed assets towards material cost for distribution system. 5% of the average distribution assets of Rs.1074.51 crores works out to Rs.53.73 crores. Keeping in view the present rundown condition of assets and the urgent need to upgrade them it is considered reasonable to take 5.4% of average asset which comes to Rs.58.29 crores for distribution and retail supply.

(c) Administration & General Expenses : Gridco have proposed an expenditure of Rs.26.3 crores on this account. This is an increase of almost 30% over the base figure of Rs.20.3 crores (Provisional Accounts of 1997-98) and is, therefore, unacceptable. The increase in cost is to be limited to the annual inflation rate over the base year. Accordingly, a figure of Rs.21.49 crores for the year 1998-99 is approved out of which Rs.10.25 crores has been apportioned to Distribution and Retail Supply.

The incidence of both the Employee's Cost and Administration General expenses taken together comes to 33.43 paise per Kwh as against the all India average of 24.04 paise per Kwh. Gridco should improve its performance to achieve the all India norms.

The share of expenditure on employees and A & G taken together is 16.81% of the total cost as against All India Average of 12.91% (Compiled upto 96-97).

(d) Expenses Capitalised : This is the portion of employees cost, administration & general expenses, repair and maintenance expenses allocated to capital. Gridco have proposed an amount of Rs.20.31 crores to be deducted from revenue requirement. This figure is considered reasonable. Out of Rs.20.31 crores, Rs.10.12 crores is apportioned to distribution and retail supply.

6.3 Interest on loans borrowed from approved institutions : Gridco had originally proposed an amount of Rs.108.95 crores towards payment of interest on long term loans which was subsequently revised to Rs.100.66 crores after discussion and rectifications of some discrepancies. This needs to be further revised to Rs.100.51 crores. This amount excludes Rs.57.53 crores charged towards interest during construction. No penal interest has been assumed in interest calculation. The average interest rate works out to 13.23% which is within the limit of Commercial Bank rate. This interest does not include interest on Bond issued if any to Pension Trust Fund. On the basis of the loan allocated to distribution and retail supply, the impact of interest on distribution and retail supply works out at Rs.48.83 crores .

6.4 Bad Debt : Gridco have proposed an amount of Rs.19.25 crores. The assumption underlying such projection has not been given. No basis could be found either in the audited account or from Notes on Accounts for 1996-97 the last year for which audit has been completed.

However, in the OSEB period, provision of reserve for bad and doubtful debts was calculated at 10% of book debt against regular consumers and at the rate of 100% of book debts against permanently disconnected consumers. Since the amount due from permanently disconnected consumers was written off under the transfer scheme, Gridco started with a clean slate. Therefore, it is presumed that all Book Debts shown in Audited Accounts of Gridco are in respect of regular consumers. It may be reasonable to keep a provision of upto 15% of differential between Gross book debt as on 31.3.98 & 31.3.99 as calculated below. This assumption of 15% is due to higher level of sales, a figure which was considered reasonable for the tariff of 1997-98.

The entire amount of bad debt amounting Rs.19.25 crores is allocated to retail supply as there is remote chance of there being any bad debt at transmission end.

	Rs. in crores

1	Amount of Gross Book debt as on 31.3.98 (Ref Retail Tariff clarification)	1051.7
2	Amount of Gross Book debt as on 31.3.99	1213.0
3	Increase in Book debt (2-1)	161.3
4	Provision @ 15% as adopted by the Commission	24.15
5	Gridco proposal	19.25

6.5 Depreciation : Gridco have proposed an amount of Rs.148.56 crores towards depreciation in their tariff application for both transmission and retail supply. This has been calculated as per principles contained in Ministry of Power (Deptt. of Power) Notification No.265 (E) dt.29.03.94. Asset wise classification and depreciation applicable there on have been given. The fixed asset details given upto 31.03.97 in tariff filing are in agreement with the audited accounts for 1996-97. For other years i.e. 97-98 & 98-99 amount of fixed assets given in RT.9 are in agreement with the figures shown in capital expenditure details (RTCL-11).

After detailed examination, the Commission accepts Rs.147.58 crores towards depreciation out of which Rs.77.50 crores is allocated to Distribution and Retail Supply.

6.6 Contribution to Contingency Reserve : Gridco have provided Rs.8.1 crores towards contribution to contingency reserve under Para-IV of the Schedule-VI of Electricity (Supply) Act 1948. As per provision of Para-IV of the Schedule-VI such contingency reserve should have a minimum value of one quarter of one percent and maximum value of one half of one percentum of the asset value. Applying this principle on the asset value of Rs.1024.17 crores allocated for distribution and retail supply, the Contingency Reserve of Rs.3.84 crores claimed by Gridco within the maximum and minimum limit is considered reasonable and, therefore, accepted.

6.7 Based on the above observations and keeping in view of the requirements of the Electricity (Supply) Act, 1948 and section 26(4) of the OER Act, 1995, the expenditure requirement of the licensee in respect of Retail Supply work out to Rs.1693.67 crores as tabulated in Annex-A.

7.0 REASONABLE RETURN

7.1 Calculation of Capital Base : On examining the Capital Base calculation of Gridco, we find it necessary to indicate our findings only on important items and items in which Commission is adopting a different figure than projected by Gridco.

7.2 Original cost of fixed assets : The cost of fixed assets finds its origin from Transfer Scheme Resolution dt. 01.04.96 shown at Rs.1975.70 crores. Information on block capital is shown in appendix RT-6. The figure as on 31.3.97 amounting Rs.2064.99 crores is in agreement with the balance as shown in the audited balance sheet of 1996-97. Gridco have estimated capital addition of Rs.96.32 crores for the year 1997-98 and Rs.425.31 crores for the 1998-99. Accordingly, original cost of fixed assets as on 31.3.98 and 31.3.99 has been projected as Rs.2161.32 crores and Rs.2586.63 crores respectively. As segregated by the licensee, asset value of Rs.1124.81 crores has been allocated to Distribution and Retail Supply business. Commission accepts the amount for the purpose of calculation of capital base.

7.3 Original cost of work-in-progress : Original cost of the work-in-progress has been taken from the project wise capital expenditure statement (RT-7) submitted by Gridco and is accepted. This includes a portion of interest capitalised pertaining to the period of construction. Out of Rs.399.45 crores, an amount of Rs.154.18 crores belongs to Retail Supply business.

7.4 Investment in "Contingencies Reserve" Account : 'Capital base' should include the amount of investment compulsorily made under para IV of Schedule VI. No investment has been made in this account and even the amount of Rs.7.5 crores permitted in last tariff order has not been invested. Hence there shall be no such component in the capital base.

7.5 Working Capital :

i. Average cost of stores : As per Para XVII(e)(i) of Schedule VI to Electricity (Supply) Act, 1948, an amount on account of working capital equal to sum of i) one-twelfth of the sum of book cost of stores material and supplies including fuel on hand at the end of each month of the year of account should be included in calculating capital base. Gridco have proposed Rs.136.37 crores on this account. This is almost 20 months consumption considering the material cost of Rs.75.60 crores annually. In a reply to the Commission's query, Gridco stated that increase in the ratio of stores to expenditure on R & M material is due to anticipated inflow of stock under multilateral and bilateral line of credit. To support their statement Gridco have not come up with any concrete proposal for treatment of the excess stock. During discussion, Gridco clarified that their average lead time for procurement is three months. Stores on the basis of three months consumption is considered reasonable. Accordingly, Rs.18.91 crores is taken towards average cost of stores instead of Rs.136.37 crores shown for the purpose of capital base calculation for transmission and distribution taken

together. Out of this, a sum of Rs.14.57 crores is allocated to Retail Supply business, considering three months consumption.

ii. Average cash & bank balance : According to in Para XVII(1)(e)(ii) of Schedule-VI, an amount equal to 1/12 of the sum of cash & Bank Balances is to be considered on account of working capital on certain conditions.

The fund requirement for two months payment of employees cost and administrative and general expenses would be appropriate for meeting working capital requirement. Hence instead of taking 1/12 of the sum of cash of bank balance at the end of each month of the year of account, a lower amount of Rs.36.07 crores is considered reasonable for the purpose of working capital in respect of Retail Supply business.

7.6 Loans and debentures : Amount of loan pertaining to retail supply business amounting Rs.500.12 is considered acceptable for deduction for the purpose of calculation of capital base. (RT-8). No debentures have been issued. But in consonance with the transfer scheme and subsequent division between Transmission and Bulk Supply and Distribution and Retail Supply businesses, Rs.400 crores of Zero Coupon Bond and Rs.30 crores of Pension Trust Bond has been allocated by Gridco to Transmission business. Balance of Rs.120 crores pertaining to Pension Trust Bond is allocated to Retail Supply business. But these amounts are long term liability of the licensee and are in effect loans in terms of (ii-a) of XVII(i) of the Schedule VI. Hence the amount of Rs.120 crores has to be deducted for calculation of capital base. However, this amount does not qualify for reasonable return.

7.7 Calculation of Reasonable Return : Reasonable Return as defined in Para XVII(9) of Schedule VI means :- in respect of any year of account the sum of following :

(a) the amount found by applying standard rate to the Capital Base.

(b) the income derived from investment other than those included in capital base.

(c) the amount equal to 1/2 of one percentum on any loans advanced by Board.

(c-1) an amount equal to 1/2 of one percentum on amounts borrowed from organisations of institutions approved by State Govt.

(c-2) an amount equal to 1/2 of one percentum on the amounts realised by issue of debentures.

(d) an amount equal to 1/2 of one percentum on accumulation in development reserve created by Central Govt.

(e) such other amount

Out of above, only items (a) and (c-1) are applicable in case of Gridco. The licensee has arrived at the figure of reasonable return by multiplying standard rate of 15.5% to capital base. As per the provision of Schedule Six of the Electricity Supply Act, 1948, the licensee is also entitled to get ½% on the amount borrowed from the organisation or institution approved by the State Govt. as part of reasonable return. Thus ½% of total loan of Rs.500.12 crores amounting Rs.2.5 crores can be included while calculating reasonable return.

7.8 The calculation of reasonable return works out as follows (detailed calculation is given at Annex-B to this order) :

Standard rate of 15.5% on capital base of Rs.166.10 crores	Rs.25.75 crores
1/2% on loan borrowed from the approved institution i.e. Rs.500.12 crores	Rs.2.50 crores
Total	**Rs.28.25 crores**

8.0 MISCELLANEOUS RECEIPT

8.1 The licensee has proposed miscellaneous receipt of Rs.47.5 Crores for 1998-99 as follows:

Miscellaneous receipt from consumers	Rs.1.00 Crore
Delayed payment surcharge	Rs.36.00 Crores
Other income(house rent, hire charges tender paper etc.)	Rs.4.50 Crores
Meter rent	Rs.6.00 Crores
Total	**Rs.47.50 Crores**

8.2 Miscellaneous receipt from consumers amounting Rs.1.00 Crores is accepted. Amount claimed by

GRIDCO in respect of Delayed payment surcharge is accepted. As per Audited Annual Accounts of GRIDCO for 96-97 the figures shown under DPS amounts to Rs.32.98 Crores. Considering higher volume of sale for 98-99, the figure of Rs.36.00 Crores assumed by GRIDCO is considered reasonable. Other incomes of Rs.4.50 Crores shown by GRIDCO is on lower side in comparison to audited figure of the accounts of 96-97. The Commission considers Rs.5.58 Crores as a more reasonable estimate. Gridco have estimated meter rent as Rs.6.00 Crores for 1998-99. As per audited annual accounts for the financial year 1996-97 the meter rent amounts to Rs.4.27 Crores. The Commission has approved meter rents to the effective from 1.12.98. Therefore estimate of Rs.6 crores for 1998-99 is acceptable.

8.3 To sum up, Commission estimates miscellaneous receipt of Rs.48.58 Crores as against Rs.47.5 Crores proposed by the Licensee.

9.0 SUBSIDY

It is understood that OSEB was claiming subsidy under the following heads :

a. Rural Electrification Operation.

b. Industrial Policy Resolution.

c. Energisation of lift irrigation points.

GRIDCO have not claimed any amount towards subsidy in their tariff application. No policy directive under Section 12(3) of the Act, 1995 has been issued by the Govt. of Orissa with commitment to grant subsidy. Hence no subsidy element can be built into tariff for 1998-99. However, in a note to their Retail Tariff application, GRIDCO has stated that it has not received any subsidy since its incorporation. An amount of Rs.198.1 Crores stands receivable from Govt. of Orissa, as per details given below :

Supply of power to EOU at NTPC rates(1996-97)	Rs.42.49
IPR subsidy (1997-98)	Rs.22.87
Receivable against BIFR award of consumers	Rs.15.05
Subsidy against Sec.59 of Electricity (Supply) Act, 1948	Rs.68.78
Electricity duty of Govt. Dept. on 1.4.96	Rs.04.41
Capital subsidy for L I paid	Rs.44.50
	Rs.198.10

9.3 We are unable to comment on the position of subsidy receiveable because Gridco has not produced before us any evidence to substantiate that the subsidy receivable is attributable to loss incurred in complying with the Govt. policy directives and instructions issued by the Govt. of Orissa. Gridco will have to take up the matter with the Govt. of Orissa.

10.0 TRANSMISSION & DISTRIBUTION LOSS

10.1 The documents filed by Gridco indicate that the total loss rate for the system (sum of technical and non-technical losses) for the period 1st April,1997 to 31st March, 1998 was approximately 46.6% of the energy injected into the Gridco system. This level stands in contrast to the historic levels as reported to various agencies by the OSEB and to the indication this Commission received from Gridco in its previous tariff filing that losses for the period ending 31st March, 1998 would be restricted to a level of 42%. In that proceeding, this Commission did not find persuasive support for Gridco's position that customers should bear the costs of this higher level of losses since it is difficult to describe operating at such levels as efficient and determined that 35% was a more reasonable loss level.

10.2 That decision was the result of the process that this Commission continually employs as it carries out its functions, namely balancing the interests of the licensee with those of its customers. We know that we must set tariffs that allow the licensee a reasonable opportunity to earn revenues that are sufficient for operating, maintaining, rehabilitating and expanding the system to provide a proper quality of service. However, we must also not force customers to pay for inefficient licensee behaviour. We must carry out the same balancing in this proceeding.

10.3 Gridco has based its current filing on a proposal to reduce its total loss rate for the system from 46.6% to 41%. However, we are far from convinced that Gridco has been efficient in reducing losses thus far, and we find little in the record to assure us that Gridco will succeed in achieving its target. Rather, it is equally likely that Gridco will repeat its poor performance of past years and once again discover that its losses are higher than either the level it estimated previously or that it has committed to meet. Further, we remain convinced that it is unreasonable to expect consumers to bear the burden of system losses that result from Gridco's inefficiency and mismanagement in this area and for tariff purposes will maintain the level that we accepted for the existing tariffs.

10.4 Nevertheless, as we stated in the tariff concept paper, we are willing to consider some measures of

performance based tariff design. Accordingly, we consider it pragmatic to treat the amount of difference between the revenue requirement calculated on the basis of Gridco's estimated T&D loss of 41% and the revenue requirement calculated on the basis of the reasonable level of 35% as has been determined by us as a special category of capital. This amount with RBI rate of interest will be considered for inclusion in the revenue requirement for tariff purposes only when Gridco or its successor licensees produce evidence of having reduced T&D losses to the level of 35% which for us is a benchmark. If Gridco or its successor licensees are able to reduce the T&D losses below the benchmark level of 35%, we will also consider, in line with our approach outlined in our tariff concept paper, to increase the return from the existing level by one percentage point for every percentage decrease in the T&D losses. While providing an incentive to Gridco or its successor licensee to reduce T&D losses, we hope that its fruits will be passed on to the consumers in general.

11.0 DETERMINATION OF TARIFF

11.1 Over the years, a tariff structure has developed keeping in view the nature and purpose of supply as mentioned in Section 49 of the Electricity (Supply) Act, 1948. The endeavour of the government to accommodate many socio-political objectives of the state in the tariff design and utility mangement has led to inefficiency, inequity and sickness of the utility. In the process, certain categories of consumers have been paying a small part of the cost of their supply and enjoying a high degree of subsidy. On the other hand, some other consumer categories have been charged at a rate higher than the cost of supply. Cross-subsidy within the electrical utility without balancing the overall revenue-cost of the utility has often led to a revenue deficit and sapping of the generation of investible resources. With the reform of electricity industry, an attempt is being made now to gradually change over to a cost-based tariff to promote end-use efficiency and make the utility economically viable.

11.2 During the tariff hearing, many HT/EHT industries pleaded for a tariff structure which would reflect the cost of supply and reduce the burden of cross-subsidy they carry so as to make their products competitive in the market. They also pointed out that the policy of charging them much in excess of their cost of supply makes it economical for them to switch over to captive power plants.

11.3 It was a universal demand on the part of domestic consumers that the tariff in respect of domestic consumers should not be fixed at a high rate as they were not in a position to bear any additional burden on their consumption and they were not able to pass on the additional burden to others like the industrial and commercial consumers. The Small & Medium Industries pleaded for a tariff lower than the cost of supply to retain themselves in the business. Their submission was that without cross-subsidy, they would go out of business. The investors on the other hand want a tariff structure that ensures for them a reasonable return on their investment.

11.4 The Commission has the difficult task of balancing the needs of various user-groups with conflicting interests. The Commission has to keep in view the objective of the Reform Act that it should lead to the development and management of the electricity industry in the State in an efficient, economic and competitive manner.

11.5 Taking into account all aspects of licensees tariff filing and the representations and submissions made by the objectors during the proceeding as also the views expressed in the meeting of the Commission Advisory Committee we find it appropriate to redetermine tariff and the charges to be realised by Gridco. Charges and treatment for various categories are given in the succeeding paragraphs of this order. We direct that these are made effective from 1st December, 1998 after publication in accordance with Section 26(5) of the Reform Act, 1995.

11.6 The proposal of Gridco contains suggestion for unbundling of the tariff to distinguish between the various functions undertaken by the utility. Separate charges have been proposed for separate activities :
(i) Customer service charge to recover the following :

(a) maintenance of meter
(b) meter reading
(c) preparation of bills
(d) delivery of bills
(e) collection of revenue
(f) maintenance of customer accounts.

(ii) Demand charge to meet a component of the fixed cost incurred in the system for meeting the consumers' load.

(iii) Energy charge reflecting the variable cost of power purchase.

11.7 Customer Charge
Gridco have proposed a Customer Service Charge as in the following table :

Customer category	Proposed CSS Rs./month	Present meter rent Rs./month	Rebate for own meter Rs./month
EHT	1500	2100	Nil

Railway Traction	2000	2750	Nil
HT Customers	500	1275	Nil
LT 3 Phase	105	105	75
LT 1 Phase	15	15	10

11.8 There is convincing logic in the proposal to realise the fixed monthly minimum charge from all types of consumers to cover fixed cost of the licensee other than those covered under demand and energy charges. The cost component of items covered as suggested by Gridco have been looked into and it is considered desirable to exclude meter rent. This is due to the fact that the consumer has the option to supply his own meter, in which case he shall not be liable to pay meter rent. The Commission accepts the proposal of Gridco to have charges on all categories of consumers based on (a) demand (b) energy (c) a fixed monthly minimum charges, & (d) meter rent. However, in case of consumers with contract demand of less than 110 KVA, the monthly minimum fixed charge will cover the demand as well as the monthly customer charge.

11.9 However, customer charge may be levied in respect of consumers with connected load of 110 KVA and above as in the following table :

11.10 Customer Charge for Consumers with connected load 110 KVA or above:

Category	Energy supplied	Customer charge/per month (in Rupees)
Public Water Works	LT	30
General Purpose	LT	30
Large Industry	LT	30
Bulk Supply(Domestic)	HT	250
Irrigation	HT	250
Public Institution	HT	250
Commercial HT	HT	250
Medium Industry	HT	250
General Purpose	HT	250
Public Water Works	HT	250
Large Industry	HT	250
Power Intensive	HT	250
Mini Steel Plant	HT	250
Railway Traction	HT	250
General Purpose	EHT	700
Large Industry	EHT	700
Railway Traction	EHT	700
Heavy Industry	EHT	700
Power Intensive Industry	EHT	700
Mini Steel Plant	EHT	700
Emergency supply to		
Captive Power Plants	EHT	700
Colony Consumption	EHT	700

11.11 Demand Charge for Consumers with contract demand of less than 110 KVA:
This is a well accepted principle that a utility's cost comprises a fixed component relating to demand and a variable component relating to energy supplied. In fact, demand charge is a standard recovery from consumers with contract demand of 110 KVA and higher. Demand charge is not levied on consumers with contract demand lower than 110 KVA as demand metering is not provided in such cases in the interest of economy. However, it will be appropriate to recover this component of the fixed cost from consumers with contract demand of less than 110 KVA. Also this charge being fixed in nature can be combined with the customer charge for simplicity. With the introduction of this fixed charge, the existing practice of minimum energy charge for specified consumer categories should be withdrawn. Taking all these factors into consideration, the Commission has decided that a monthly minimum fixed charge shall be payable by consumers having contract demand of less than 110 KVA according to the scale below :

Consumer Category **Monthly minimum fixed charge**

1. Domestic :	Rs.20 for the first KW or part thereof contract demand per month. Rs.10 per month for each additional KW or part thereof contract demand.
Kutir Jyoti :	Rs.30 per month inclusive of all charges.
2. Commercial :	Rs.30 per KW/month for the first KW or part thereof contract demand. Rs.20 per month for each additional KW or part thereof contract demand.
3. Irrigation :	Rs.20 per month for the first KW of connected load or part there of. Rs.10 per month for each additional KW of connected load or part there of.
4. Street Lighting :	Rs.20 per month for the first KW of connected load or part there of. Rs.10 per month for each additional KW or part there of.
5. Small Industries :	Rs.40 per month for first KW of connected load or part there of. Rs.30 per month for each additional KW or part there of.
6. Medium Industries :	Rs.80 per month for first KW of connected load or part there of. Rs.50 per month for each additional KW of connected load or part there of.
7. Public Institution :	Rs.80 per month for first KW of connected load or part there of. Rs.50 per month for each additional KW of connected load or part there of.
8. Public Water Works : (less than 110 KVA)	Rs.80 per month for first KW of connected load or part there of. Rs.50 per KW/month for each additional KW of connected load or part there of.

11.12 Demand Charge for Consumer with Contract Demand of 110 KVA and above :
The proposal of Gridco is to increase the existing demand charge from Rs.200/KVA/month to Rs.300/KVA/month for all consumers with contract demand of 110 KVA and above. Gridco have observed that such increase in demand charges would allow upfront recovery of fixed expenses and would give a clear signal about the proposed "Availability Tariff" of Central Sector Thermal Power Stations, which may increase the fixed cost liability of Gridco. There was objections from all affected groups to this increase. The Commission considered the following aspects in deciding this matter.

i. Gridco have estimated revenue from demand charges using a factor of 82% of the sum of contract demands. From the figures furnished by Gridco for a period of six months from 01.10.97 to 31.03.98, the above factor works out to about 90%, thus enabling Gridco to recover higher revenue from demand charge.

ii. The system load factor of Gridco is about 67% implying that 67% of the fixed cost can be recovered through energy charges. Thus, 33% of fixed cost is to be recovered through demand charge. On this basis, the Commission have separately approved the demand charge of Rs.200/KVA/month in the bulk supply tariff.

iii. Commission also took into account the demand charge prevailing in other utilities in the country. High demand charge may motivate large consumers to set up their own Captive Plants.

11.13 Keeping all these factors in view, the Commission has decided not to change the present level of Demand Charge of Rs.200/ KVA per month for all consumers with contract demand of 110 KVA and above.

11.14 Consumers with contract demand 110 KVA and above are required to pay a demand charge on the basis of maximum demand recorded or 80% of contract demand whichever is higher. The revenue from consumers with contract demand of 110 KVA and above has been calculated by Gridco by multiplying the proposed rate by 82% of the contract demand expressed in KVA. The factor of 82% has been arrived at by Gridco on the basis of recorded maximum demand and contract demand for the period of Oct'97 to Mar'98 as given at page 4/10 of the clarification on retail tariff application 98-99, for consumer categories of General Purpose, Large Industry, Heavy Industry, Mini Steel Plant, Public Water Works, Power Intensive Industry and Railway Traction.

11.15 The Commission has examined the billing details of consumers liable to pay demand charge. Apart from the categories of consumers mentioned above there are consumers belonging to other categories also with contact demand of 110 KVA and above, who also pay demand charge. These have also been taken into consideration.

11.16 Where the recorded demand is less than 80% of the contact demand, the revenue from demand charge is calculated on the basis of the demand charge realization of at least 80% and in case where the recorded maximum demand is more then 80%, the demand charge is calculated on the basis of actual demand recorded. Month wise contract demand, recorded maximum demand and evaluated billing demand are indicated in the table, below for the period of six months from 10/97 to 3/98 as furnished by Gridco :-

Date	Cd(KVA)	MD(Recorded)		MD(Billing Demand)	Billing Demand
10/97	957680	717573	75.73%	875388	90.19%
11/97	1012254	918900	90.77%	906048	98.60%
12/97	1011803	713983	70.53%	90800	89.74%

1/98	1022679	753636	73.69%	945839	92.48%
2/98	1001747	716406	71.51%	883466	88.19%
3/98	999977	728171	72.81%	898288	89.83%
Average			75.73%		90.16%

11.17 Analysis of the figures indicates that the billing demand is on an average 90% of the contract demand. This factor has been accepted by the Commission as reasonable and the proposed factor of 82% for the calculation of revenue from demand charge by Gridco is an under estimation of revenue. The Commission expects that in subsequent tariff proposals Gridco will work out the factor for a period of 12 months to assess the demand charges accurately for these categories of consumers, when this factor may be reviewed.

11.18 Revenue likely to be earned on account of levy of demand charge has been shown separately in the calculation of expected revenue from charges for the year 98-99.

11.19 As per the provisions of the Regulation all consumers covered under two part tariff shall pay a penalty in case actual maximum demand exceeds the contract demand. No distinction is made between the customers who exceed the contract demand at off peak hours and those who over burden the system by exceeding the contract demand at peak hours. Gridco have accordingly proposed that as the customers exceeding the contract demand outside the peak hours actually help the system by leveling the load shape, no penalty should be levied on overdrawal outside the peak hours up to a level of 120% of contract demand. Beyond this level, Gridco propose that a reduced penalty of 1/4 (one fourth) of the existing penalty rate will apply. The existing rate of penalty will continue for overdrawal at peak hours. The facility is proposed to be extended only to industries drawing power in EHT system since TOD meters are in place for this category at this time. Once TOD meters are put in place for industrial consumers at HT, this facility will also be extended to them.

11.20 During the course of the hearing, some of the objectors suggested that the overdrawal limit without penalty during off peak hours may be totally removed or kept at 150% of contract demand without penalty. Allowing an overdrawal limit during off peak hours to 150% of the contract demand may create technical problems of over-loading of equipment. The overdrawal load limits of many of the equipments being 20% Commission considers it reasonable to allow off peak drawal of power to 120% of contract demand without penalty. Penalty at full rate shall apply for overdrawals beyond this rate during off-peak hours.

11.21 Some objectors have questioned the levy of demand charge at a minimum of 80% of Contract Demand. It has been suggested by some objectors that demand charge should be levied on the average actual demand of the consumer. The basis of levying demand charge subject to a minimum of 80% of the contract demand is to ensure the recovery of minimum fixed costs for the installed facility. Commission therefore does not consider it appropriate to make any change in the present system of levying a demand charge at a minimum of 80% of the contract demand.

11.22 Energy Charge :
The energy charge paid by the consumer may be variable in nature and is dependent on the quantum of power consumed by each individual consumer. Keeping in view the objective of gradual change over to the system of cost-based tariff, the Commission considers it appropriate to relate energy charge to the voltage of supply to reflect the associated cost.

11.23 There is a practice of imposing a surcharge/ rebate for supply at a voltage other than the voltage for which tariff was fixed. With the introduction of tariff related to voltage of supply, it is not necessary to continue with the levy of surcharge for different voltage levels. The Commission has decided to adopt the following tariff structure for all loads of 110 KVA and above :-

Voltage of supply	**Demand Charge**	**Energy Charge**
L.T.	Rs.200/- per KVA	270 paise/unit
H.T.	Rs.200/- per KVA	260 paise/unit
E.H.T.	Rs.200/- per KVA	250 paise/unit

However, H.T. & E.H.T. consumers will be charged at the rate of 200 paise/unit & 180 paise/unit respectively towards energy charge for all consumptions in excess of 60% load factor calculated on contract demand.

11.24 The Commission has made several exceptions to the above uniform tariff structure to insulate consumers from a steep rise in tariffs. Tariff for consumers in the Domestic Category has been kept well below the normative level. The same consideration has been adopted for Small Scale Industries, Street Lighting and Public Institutions. Mini Steel Plant consumers will pay energy charge of 240 paise/unit both at H.T. and E.H.T. supply with incentive as aforesaid for consumption in excess of 60% load factor calculated on contract demand. Similarly, Public Institutions comprising schools, colleges and hospitals will pay less than what would have been payable by them according to the voltage of supply.

11.25 INCENTIVE FOR H.T. & E.H.T. CONSUMERS :
GRIDCO has reported that during last three years, permission has been granted to a number of industries to set up captive power plants with a total capacity of 2022 MW. These permissions have been granted to the existing consumers of GRIDCO as well as to new industries yet to come up. All these industries receive power either at HT or EHT.

11.26 In order to provide adequate incentive to the Power Intensive industries not to switch over from the GRIDCO's system in favour of captive power plants, GRIDCO have proposed an incentive tariff to be made applicable only to a selected group of power intensive industries. The proposed tariff is lower than the tariff applicable to other industries in the same category as well as other EHT consumers.

11.27 In the Tariff Concept Paper, the Commission had stated that tariff should gradually be based on voltage of supply rather than on the nature and purpose of supply. Further the Commission appreciates the desirability of retaining industries as consumers and encourage new industries to become consumers of the Distribution Licensee.

11.28 The Commission, therefore, decides that incentive tariff may not only be introduced but such incentive should also be available to industries other than the Power Intensive Industries. Those consumers who are availing power supply at HT or EHT and are maintaining load factor above 60% should be given incentive in the form of lower energy charges in respect of consumption beyond 60% load factor. Accordingly the Commission has decided that the HT industries maintaining a load factor above 60% calculated on the contract demand will be charged at the rate of 200 paise per unit for all consumption in excess of the consumption beyond the load factor of 60%. Similarly EHT consumers attaining a load factor above 60% calculated on the contract demand will be charged at the rate of 180 paise/unit for all consumption in excess of load factor of 60%. This tariff shall be applicable for the power consumed from GRIDCO source only.

11.29 Adoption of load factor for consumers with defective meter and without meter :
The Commission considered the proposal submitted by GRIDCO to revise the load factor in respect of domestic and commercial consumers with defective meters and with unmetered supply.

11.30 The Commission is seriously concerned about the high commercial loss of Gridco and the imperative need to tackle the problems of theft, abstraction and unauthorised consumption of energy. At the same time load factor billing cannot continue as the sole instrument to meet Gridco's target of energy sale. Rectification of defective meters and installation of meters in place of unmetered supply has to be the central focus of Gridco's commercial strategy.

11.31 In addition, loss occurring in the system due to theft of electricity directly from overhead distribution lines is also causing commercial loss in the system. Priority should be given for replacement of meters of consumers with three phase supply, consumers in the commercial category & other large loads with single phase supply. The Commission directs Gridco to submit at the end of each quarter the following information :
(i) improvements in rectification, replacement and installation of meters.
(ii) Measures taken for eradication of unauthorised tapping from the overhead distribution lines.

11.32 At present assessment of consumption in respect of domestic consumers is being done assuming the load factor of 15%. Similarly, for commercial consumers 20% load factor is used. Consumers covered under small industries category are billed at a load factor of 15%. In case of irrigation category for the period from June to October, a load factor of 8% is used and for the months of November to May, a load factor of 15% is used.

11.33 The proposal of Gridco for increase in the load factor for unmetered supply and defective meters is given below :

Domestic Consumers :

Upto 1 KW	-	55%
> 1 KW upto 2 KW	-	50%
> 2 KW upto 3 KW	-	45%
> 3 KW	-	40%

Commercial Consumers:

Upto 1 KW	-	55%
> 1 KW upto 2 KW	-	50%
> 2 KW upto 3 KW	-	45%
> 3 KW	-	40%

11.34 Field studies conducted by Gridco reveal that energy consumed or physically drawn by consumers is substantially more than that estimated through load factor criterion of 15% and 20% presently in use for domestic and commercial consumers respectively. The Commission have decided to raise the load factor in respect of Domestic category from 15% to 20% and for Commercial category from 20% to 30%. The Commission also examined the present load factor of consumers in Small industries and Irrigation and have decided that the present level of load factor should continue.

11.35 The Commission's approval of enhanced load factor will be reviewed from time to time. If the Commission comes to the conclusion that the Distribution and Retail Supply Licensee has not taken effective steps in metering and has sought to depend on load factor billing to increase sale of energy, it will consider revising the load factor downwards.

12.0 Tariff applicable for the consumers with connected load of less than 110 KVA

12.1 Domestic:
The majority of electricity consumers in Orissa are in Domestic category where they are highly dependent on subsidy.

(a) The existing tariff for Domestic category for supply at 230/400 V is given below:

i) For the total monthly consumption not exceeding 30 units : 90 paise/kwh.

ii) For the total monthly consumption exceeding 30 units :
First 75 units 105 paise per unit
Next 75 unit 150 paise per unit
Balance units 220 paise per unit

iii) For supply at 11/33 KV – energy charge 150 paise per unit.

iv) The calculation of monthly minimum energy charge is based on 22 units for half KW of contract demand or part thereof.

v) In case of unmetered or defective meter, energy consumption is assessed and billed using the load factor of 15% on contract demand.

vi) A prompt payment rebate of 10 paise per unit is allowed if payment of the bill is made in full within 15 days of the date of the bill.

(b) The Commission examined the existing tariff structure for this category with particular reference to Gridco's proposal to have a uniform rate instead of the existing slab rate. On balance of consideration to gradually decrease subsidy and yet facilitate use of electricity by small consumers, the Commission has decided to retain the slab system but rationalise it. The revised energy charge for supply at 230/400 V shall be as under.

i) Kutir Jyoti Consumers - Rs.30.00 per month.

ii) In case of other Domestic consumers on the total monthly consumption:
First 100 Units - 120 paise per unit
Next 100 units - 170 paise per unit
Balance units of consumption - 245 paise per unit

iii) The present practice of monthly minimum energy charge will cease with effect from the date of implementation of the new tariff.

iv) The Commission has decided to fix a monthly minimum fixed charge at the rate of Rs.20 for the first KW of contract demand or part there of. This charge will be enhanced at the rate of Rs.10 per KW per month for each additional KW or part thereof.

v) In case of unmetered supply or defective meter, the energy consumption shall be assessed and billed using a load factor of 20% on the contract demand. For this purpose, the connected load of less than 0.5 KW shall be treated as 0.5 KW.

vi) For supply at 11/33 KV the energy charge shall be payable at the rate of 160 paise/Kwh. The monthly demand charge for domestic consumers availing power supply at HT shall be at the rate of Rs.10 per Kw per month.

vii) HT customers will pay a customer service charge of Rs.250 per customer per month.

viii) The practice of prompt payment rebate of 10 paise/unit shall continue.

12.2 Commercial
(a) The existing tariff for the consumers covered under commercial category is given below :-

For power supply at 230/400/1100 V :-

i) for all units if the consumption does not exceeds 100 units per month - 245 paise per unit.

ii) for all units if the consumption exceeds 100 units per month but upto 300 units-290 per unit.

iii) for all units if the consumption exceeds 300 units per month - 320 paise per unit.

iv) Monthly minimum energy is calculated at the rate of 23 units for half KW of contract demand or part there of.

v) In case of unmetered supply or defective meter, energy consumption shall be assessed and billed using the load factor of 20% of the contract demand.

(b) The Commission reviewed the existing tariff structure and decided the following:-

i) For the total monthly consumption :-
First 100 units - 270 paise/unit
Next 200 units - 360 paise/unit
Balance units - 410 paise/unit

ii) For supply at HT, the energy charge shall be 260 paise per unit.

iii) In case of unmetered supply or defective meter energy consumption shall be assessed and billed using the load factor of 30% on the contract demand. For this purpose the connected load of less than 0.5 KW shall be treated as 0.5 KW. The present practice of prompt payment rebate shall continue. Minimum energy charge for these categories of consumers will be discontinued with effect from the date of implementation of this tariff.

iv) Monthly minimum fixed charge of Rs.30/- for the first KW of contract demand per month shall be payable. This charge will go up at the rate of Rs.20/- for each KW of contract demand or part there of.

12.3 Small Industry
The load factor shall be calculated @ 15% on the connected load in respect of these consumers with defective meter and unmetered supplies for the purpose of assessment of consumption and billing.

12.4 Irrigation
In respect of irrigation consumers for the months of June to October, a load factor of 8% and for the month of November to May a load factor 15% shall be considered for assessment of consumption and billing.

12.5 The rate of tariff as determined above is reflected in Annex-D**.**

13.0 OTHER CHARGES
The Commission also authorises levy of other charges as given below :

13.1 Demand Charge : The monthly demand charge will be calculated on recorded/evaluated maximum demand or 80% of contract demand whichever is higher.

13.2 Monthly Minimum Energy Charge : The monthly minimum energy charge for categories of consumers for whom it is applicable will be discontinued with effect from the date the new tariff comes into force.

13.3 Metering on LT side of Consumers Transformer : Transformer loss computed as given below to be added to the consumption as per meter reading.

Energy loss = 730 X KVA reading of the transformer/100.
Loss in demand = 1% of the reading of the transformer (for two part tariff)

13.4 Surcharge for supply at voltage other than specified voltage shall not be applicable.

13.5 Delayed payment surcharge : The Commission approves levy of delayed payment surcharge at the rate of 2% per month and shall be levied prorata for the period of delay counted from the due date of payment indicated on the bill in respect of the following categories of consumers.

i) Large Industries
ii) Medium Industries
iii) Public Water Works
iv) Railway Traction
v) Street lighting
vi) Power intensive Industries
vii) Heavy Industries
viii) General Purpose Supply
ix) Public Institutions
x) Mini Steel Plants
xi) Emergency supply to CPP

13.6 Power Factor Penalty : The Commission approves the following :

A power factor penalty shall be added as a percentage of monthly demand charges and energy charges as given below and shall be applicable to the following categories of consumers.

i) Large Industries
ii) Public Water Works (110 KVA and above)
iii) Railway Traction

iv) Power Intensive Industries
v) Heavy Industries
vi) General Purpose Supply
vii) Public Institutions (110 KVA and above)
viii) Mini Steel Plants
ix) Emergency supply to CPP.

Rate of P.F. penalty :
i) 0.5 for every 1% falls from 90% upto and including 60%

plus

ii) 1% for every percentage fall below 60% upto and including 30%

plus

iii) 2% for every 1% fall below 30%.

13.7 Penalty for overdrawal of power above the contract demand : For maximum demand in excess of contract demand in a month, a penalty at the prescribed rate of demand charge shall be imposed. However, in case of EHT industries, no penalty would be imposed on overdrawal outside the peak hours upto the level of 120% of the contract demand of the consumer. Beyond this level of 120% of contract demand during off-peak hours, a penalty at the prescribed rate of demand charge shall be added.

13.8 The existing rates of penalty will continue for overdrawal at peak hours i.e. for maximum demand in excess of contract demand, a penalty at the prescribed rate of demand charge shall be added.

13.9 Customer Charge : As indicated in paragraph 11.10 above and also Annex-D.

13.10 Re-connection Charge :

Single Phase Domestic Consumer	Rs.30/-
Single Phase other consumer	Rs.50/-
3 Phase line	Rs.100/-
HT & EHT line	Rs.500/-

13.11 Temporary connection charges : The existing practice should continue without any change.

13.12 New connection charges for LT : Since the existing system of preparation of estimates causes delay in new connections for prospective small consumers, for new connections upto and including 3 KW load, there will be a flat charge of Rs.500/-. The existing practice of preparation of estimate and payment of charge based on the estimated amount shall continue without any change for connections above 3 KW load.

13.13 While the Commission finds it logical to allow charges under a fuel surcharge formula, we have to indicate that the formula shall be separately notified in the regulations.

13.14 Meter Rent : Monthly meter rent shall be charged from consumers to whom meter has been supplied by the licensee according to the following scale:

Meter	**Rent in Rupees**
1. Single phase electro-magnetic Kwh meter	15/-
2. Three phase electro-magnetic Kwh meter	30/-
3. Three phase electro-magnetic trivector meter	800/-
4. Trivector meter for Railway Traction	800/-
5. Single phase Static Kwh meter	35/-
6. Three Phase Static Kwh meter	250/-
7. Three phase Static Trivector meter	800/-
8. Three phase Static Bivector meter	800/-

13.15 The revenue requirement for 1998-99 submitted by the Gridco is modified to the extent indicated in this order. It is estimated on the basis of tariff approved by us that the licensee shall realise a total revenue of Rs.1725.95 crores for a full year implying a clear profit of Rs.28.44 crores and "reasonable return" amounting to Rs.28.25 crores. Since the new tariff shall be effective from 1st December, 1998. Gridco shall not be able to earn clear profit during the current financial year.

13.16 For the financial year 1998-99, it is estimated that Gridco is likely to incur a loss. This has partly arisen due to delay in filing the tariff application. However, the actual loss to be incurred can be assessed only on close of the financial year and Gridco may submit its claim in the revenue requirement during the next tariff filing.

13.17 Gridco had submitted consolidated as well as dis-aggregated revenue requirement in respect of all the four zones to which it has restructured itself. While the Commission has noted the dis-aggregated figures as given by Gridco, it is not in a position to confirm the dis-aggregated revenue requirements. The capital base and the clear profit for the zones cannot be determined before decision is taken on the licence applications filed by the four zonal distribution companies.

The Commission orders that Gridco takes appropriate action in pursuance of this order.

(S.C. MAHALIK)
CHAIRMAN

(A.R. MOHANTY)
MEMBER

(D.K. ROY)
MEMBER

Annexure - A

EXPENDITURE FOR THE FINANCIAL YEAR 1998-99

Commission's approval

Expenditure

Para XVII Clause-2(b) of Schedule VI of Elec. (Supply) Act 1948			**Rs. in crores**
I	Cost of Power		1084.88
	Transmission cost		202.01
	Reasonable return of Bulk Supply business		57.56
	SUB TOTAL		**1344.45**
	LESS		
	Revenue from wheeling & other misc. receipt		62.00
	x		
	COST OF POWER FOR RETAIL SUPPLY		**1282.45**
II	Distribution & Sale of Energy		
	(a) Employees cost		207.22
	(b) Material cost		58.29
	(c) Admn. & General Expenses		10.25
III	Rents, rates and taxes other than all taxed on income & profits	(Included in A&G expenses)	
IV	Interest on loans advanced by Gridco		48.83
	(a) Interest on loan borrowed from organisation		
	(b) Interest on debenture issued by licensee		
V	Interest on security deposit		
VI	Legal charges	(Included in A&G expenses)	
	Less: Expenses capitalised		-10.12
VII	Bad Debt		19.25
VIII	Auditor's fees	(Included in A&G expenses)	
IX	Management including managing agents remuneration		

X	Depreciation		77.50
XI	Other expenses		
XII	Contribution to P.F., Staff Pension, Gratuity	(Included in A&G expenses)	
	(a) Expenses on training & other training scheme	(Included in A&G expenses)	
	(b) Bonus	(Included in A&G expenses)	
		(Total Expenses I to XII)	**1693.67**

Annexure - B

CALCULATION OF CAPITAL BASE AND REASONABLE RETURN FOR FINANCIAL YEAR 1998-99

GRIDCO **Commission's approval**

[In accordance with para XVII of Schedule VI of Electricity (Supply) Act, 1948]			
(Rs. In crores)	**BULK**	**DISTCOS**	**GRIDCO**
A.			
(a) Original cost of fixed asset Less consumers contributtion	1461.82	1124.81	2586.63
Less Consumer Contributions	0.00	209.21	209.21
Sub-total	**1461.82**	**915.60**	**2377.42**
(b) Cost of intangible asset	0.00	0.00	0
(c) The original cost of Work in progress	245.27	154.19	399.45
(d) The amount of investment compulsorily made under para-IV	0.00	0.00	0
(e) An amount on account of working capital equal to the sum of:			
(i) Average cost of stores (1/4th of the annual expenditure of materials)	4.34	14.57	18.91
(ii) Average cash and bank balance (1/6th of the sum of annual employees cost and adm & general expenses)	11.64	36.07	47.71
Total of A:	**1723.06**	**1120.43**	**2843.49**
Less			
B.			
a) The amounts written off or set aside on account of depreciation of fixed assets	197.29	223.42	420.71
b) The amount of any loan advanced by Board	761.88	500.12	1262.00
i) The amount of any loans borrowed from organisations or institutions approved by the State Govt.			
ii) The amount of any debenture issued by the licensee			

c) The amounts deposited in cash with the licensee by consumers, by way of security	430	120	550.00
d) The amount standing to credit of Tariffs and Dividends control reserve at the beginning of the year of account	0.00	110.77	110.77
e) The amount standing to the credit of the Development reserve at the close of the year			
f) The amount carried forward (at the beginning of the year of accounting) in the accounts of the Licensee for distribution to the consumers			
Total of B:	**1389.17**	**954.31**	**2343.48**
Capital Base (A-B)	**333.89**	**166.11**	**500.01**
Reasonable return @ 15.5% on Capital Base	**51.75**	**25.75**	**77.50**
1/2% of THE LOAN BORROWED FROM INSTITUTION & BOND	5.81	2.50	8.31
TOTAL REASONABLE RETURN	**57.56**	**28.25**	**85.81**

Annexure - C

CALCULATION OF CLEAR PROFIT FOR A PERIOD OF TWELVE MONTH
AS PER THE SCHEDULE VI OF ELECTRICIY SUPPLY ACT, 1948
PARA - XVII (2)

Commission's approval

		(Rs. In crores)
(A)	**Income derived from:**	
i)	Gross receipt from Sale of energy less discounts applicable thereto	1677.37
ii)	Rental of meters and other miscellaneous Charges	48.58
iii)	Sale & repair of lamps & apparatus	
iv)	Rents	
v)	Transfer fees	
vi)	Interest on investment	
vii)	Other general receipts accountable for income tax and arising from & ancilliary or incidental to business of electricity supply	
	Total of (A) (i to vii)	**1725.95**
(B)	**Expenditure properly incurred on:**	
i)	Generation & purchase of electricity	1282.45
ii)	Distribution and sale of energy	
	a) Employees cost	207.22
	b) Material	58.29
	c) A & G expenses	10.25
iii)	Rents, rates & taxes, other than all taxed on income & profit	Included in A & G expenses
iv)	Interest on loan advanced by Board	48.83
	a) Interest on loan borrowed from	
	b) Interest on debenture issued by licensee	
v)	Interest on security deposit	0.00
vi)	Legal charges	Included in A & G expenses
	Less Expenses Capitalised	-10.12
vii)	Bad debts	19.25
viii)	Auditors fees	Included in A & G expenses
ix)	Management including managing agents renumeration	0.00

x)	Depreciation	77.50
xi)	Other expenses	0.00
xii)	Contribution to P.F., staff pension and gratuity	Included in A & G expenses
	a) Expenses on apprentice & other training scheme	Included in A & G expenses
xiii)	Bonus	Included in A & G expenses
	Total expenditure i.e. total of (B) (i to xiii)	**1693.67**
(C)	**Special appropriation to cover:**	
i)	Previous losses	0.00
ii)	All taxes on income and profits	0.00
iii)	Instalments of written down amounts in respect of intangible asset and new capital issue expenses	0.00
iv)	Contribution to contingency reserve	3.84
v)	Contribution towards arrear depreciation	0.00
	a) Contribution to Development Reserve. (referred to in para)	
	b) Debt redemption obligation	
vi)	Other special appropriation permitted by the State Govt.	0.00
Total expenditure i.e. total of (C) (i to vi)		**3.84**
CLEAR PROFIT (A-B-C)		**28.44**
Reasonable Return (Form no. F 16)		**28.25**
Excess or deficit of clear profit over reasonable return		**0.19**

Annexure - D

TARIFF EFFECTIVE FROM 1st DECEMBER, 1998

Sl. No.	Category of Consumers	Voltage of Supply	Demand Charge (Rs/KW)/ (Rs/KVA)	Energy Charge (P/KWh)"	Customer Charge (Rs/ Customer)	Monthly Minimum Fixed Charge for first KW or part (Rs.)	Monthly Fixed Charge for any additional KW or part (Rs.)	Rebate (P/KWh)
LT Category								
1.	Kutir Jyoti < 30U/month	200/400 V	FIXED MONTHLY CHARGE Rs. 30					
2.	Domestic (Cons.<=100U/month)	200/400 V		120		20	10	10
	Domestic (Cons.>100, <=200U/month)	200/400 V		170		20	10	10
	Domestic (Cons.>200U/month	200/400 V		245		20	10	10
3.	Commercial (Cons.<=100U/month)	200/400 V		270		30	20	10
	Commercial (Cons.>100, <=200U/month)	200/400 V		360		30	20	10
	Commercial (Cons.>200U/month)	200/400 V		410		30	20	10
4.	Irrigation	200/400 V		90		20	10	10
5.	Street Lighting	200/400 V		245		20	10	DPS
6.	Small Industry	200/400 V		245		40	30	10
7.	Medium Industry	200/400 V		270		80	50	DPS
8.	Public Institution	200/400 V		245		80	50	DPS
9.	Public Water Works <100KW	200/400 V		270		80	50	DPS
10.	Public Water Works	200/400 V	200	270	30			DPS
11.	General Purpose	200/400 V	200	270	30			DPS
12.	Large Industry	200/400 V	200	270	30			DPS
HT Category								

13.	Bulk Supply* - Domestic	11/33KV	10	160	250			10
14.	Irrigation*	11/33KV	30	80	250			10
15.	Public Institution*	11/33KV	50	240	250			DPS
16.	Commercial*	11/33KV	50	260	250			10
17.	Medium Industry*	11/33KV	50	260	250			DPS
18.	General Purpose	11/33KV	200	260	250			DPS
19.	Public Water Works	11/33KV	200	260	250			DPS
20.	Large Industry	11/33KV	200	260	250			DPS
21.	Power Intensive Industry	11/33KV	200	260	250			DPS
22.	Ministeel Plant	11/33KV	200	240	250			DPS
23.	Railway Traction	11/33KV	200	260	250			DPS
24.	Colony Consumption	11/33KV		160				DPS
EHT Category								
25.	General Purpose	132KV	200	250	700			DPS
26.	Large Industry	132KV	200	250	700			DPS
27.	Railway Traction	132KV	200	250	700			DPS
28.	Heavy Industry	132KV	200	250	700			DPS
29.	Power Intensive Industry	132KV	200	250	700			DPS
30.	Ministeel Plant	132KV	200	240	700			DPS
31.	Emerg. Supply to CPP	132KV		350	700			DPS
32.	Colony Consumption	132KV		160	700			DPS
	D.C.Services		RATE FOR D.C. SUPPLY					
33.	Domestic		RATE AT SL. 2+25% SURCHARGE					10
34.	Commercial		RATE AT SL. 3+25% SURCHARGE					10
35.	Small Industry		RATE AT SL. 6+25% SURCHARGE					10
" EHT/HT consumers consuming in excess of 60% Load Factor (L.F.) calculated on the Contract Demand shall pay at the rate of 180p/KWh & 200p/KWh respectively for all consumption in excess of the 60% L.F..								

Annexure - E

COMPARISON OF SALES PROPOSED BY GRIDCO AND APPROVED BY THE COMMISSION FOR THE YEAR 1998-99

Sl. No.	Category of Consumers	Voltage of Supply	1998-99 Consumption (MU) Gridco's Proposal	1998-99 Consumption (MU) Commission's Proposal
1	2	3	4	5
LT CATEGORY				
1.	Kutir Jyoti	200/400 V	30	30
2.	Domestic	200/400 V	1995	2134.665
3.	Commercial	200/400 V	354	432.31
4.	Irrigation	200/400 V	197	236.857
5.	Street Lighting	200/400 V	31	31
6.	Small Industry	200/400 V	161	146.972
7.	Medium Industry	200/400 V	120	120
8.	Public Institution	200/400 V	41	41.3
9.	Public Water Works <100 KW	200/400 V	51	51
10.	Public Water Works	200/400 V	11	11
11.	General Purpose	200/400 V	12	11.6
12.	Large Industry	200/400 V	13	13
	Total		**3016.30**	**3259.70**
HT CATEGORY				
13.	Bulk Supply - Domestic	11/33 KV	30	30
14.	Irrigation	11/33 KV	3	2.6
15.	Public Institution	11/33 KV	13	12.7
16.	Commercial	11/33 KV	0	0

17.	Medium Industry	11/33 KV	0	0
18.	General Purpose	11/33 KV	223	223.4
19.	Public Water Works	11/33 KV	38	38
20.	Large Industry	11/33 KV	806	806.5
21.	Power Intensive Industry	11/33 KV	218	218
22.	Ministeel Plant	11/33 KV	38	38
23.	Railway Traction	11/33 KV	42	42
	Total		**1410.7**	**1411.2**
EHT CATEGORY				
24.	General Purpose	132 KV	60	60
25.	Large Industry	132 KV	351	350.5
26.	Railway Traction	132 KV	138	138
27.	Heavy Industry	132 KV	710	710
28.	Power Intensive Industry	132 KV	100	369
29.	Ministeel Plant	132 KV	12	12
30.	Emerg. Supply to CPP	132 KV	0	0
31.	Colony Consumption	132 KV	120	119
32.	Power Int. Ind. (Opt. Incentive Trf.)	132 KV	463	0
33.	100% EOU	132 KV	0	194
	Total		**1953**	**1952.5**
Grand Total			**6380.00**	**6623.40**
T & D Loss (%)			41%	35%
Total Purchase			10814.97	10093.47

* except for 100% EOU units where 4% loss has been assumed on 194 MU sales