CHAPTER - 4

4.0 ERC AND TARIFF FILING OF KPTCL For FY07

4.1 ERC and Tariff Filing of KPTCL for FY07

1. KPTCL in their ERC for FY07 have requested the Commission to approve the Annual Revenue Requirement (ARR) and revised transmission charges as detailed below:

	Rs. in Crores
Total Transmission Expenses	880.69
SLDC charges (50%)	4.05
Net ARR	884.74
Advance Against Depreciation	107.00
Total ARR	**991.74**

KPTCL has requested the Commission to approve the net ARR of Rs. 991.74 crores for FY07 including Advance Against Depreciation of Rs.107 crores and has also requested to approve the transmission charge of 26.06 paise per unit for FY07 as against the existing transmission charge of 19.42 paise per unit in FY06.

2. KPTCL in the present filing has sought to compute the transmission charge on the gross energy at the input point as against net energy delivered at the interface point of the ESCOMs hither to being followed, stating that KPTCL is dispensed with the bulk power business and the entire energy is accounted in the ESCOMs only.

3. The above transmission charge of 26.06 paise per unit has been computed by KPTCL on a gross input of 38057 MU. The net energy to be delivered at the interface point has been shown in the ERC as

36455 MU after a transmission loss of 4.18% and auxiliary consumption of 21 MU.

4. The percentage increase sought in transmission charge is 40% on the energy delivered to ESCOMs at the interface points.

Commission's Analysis of ERC & Tariff Filing

4.2.1 Revenue Gap

KPTCL has stated in the filing that there is a revenue deficit of Rs.266.59 crores for FY07 at the existing rates approved by the Commission, as detailed below:

	FY07 (Rs. Crores)
Total ARR	991.74
Revenue at existing rates	725.15
Total Gap	266.59

4.3 Capital Investment proposal for FY 07

1. KPTCL has proposed a capital investment of Rs. 2700 crores during 2006-07, to achieve the transmission system capacity requirement of 7007 MW under unrestricted conditions. It is stated that the system at present is capable of handling 6200 MW and is catering to a peak load of 5975 MW under restricted conditions.

2. The following proposals for construction/Augmentation works are proposed in the ERC filing:

Proposal for Transmission Lines

Voltage Level of Lines	No. of Lines
400 KV Lines	6
220 KV Lines	19
110 KV Lines	38
66 KV Lines	44

The following major lines augmentation works during the perspective plan period are also proposed:

1. 220 KV D/c line between Hiriyur 400 KV station to Gowribidanur
2. 220 KV D/c line between Narendra 400 KV station to Mahalingapur
3. 220 KV D/c line between Bastipura to Kadakola
4. 220 KV D/c Line between BTPS to Talak with LILO at Kudathini in 11th Plan
5. 220 KV D/c line between Nelamangala to Brindavan Alloys tap point and 220 KV Cable from tap point to A Station
6. 220 KV D/c line between Hoody and HAL with twin Moose Conductor instead of Single Moose conductor for meeting increasing load requirement of Bangalore City.
7. Interlinking 220 KV station of A station, East Division compound & NIMHANS with 220 KV Cable
8. 220 KV Outer ring around Bangalore incorporating Bangalore Urban and Rural districts.

Sub stations: The total number of stations proposed to be added during 10th Plan i.e. during the year 2006-07 are as follows:

i) 400 KV –6 Nos. at the end of 10th plan and 2 Nos during 2006-07
ii) 220KV-24 Nos. at the end of 10th plan and 10 Nos during 2006-07
iii) 110KV-148 Nos. at the end of 10th plan and 65 Nos during 2006-07
iv) 66KV-174 Nos. at the end of 10th plan-and 79 Nos during 2006-07

3. It is stated that execution of these works will be prioritised based on field conditions. The funds would be raised from Financial Institutions like PFC and REC.

4. The Commission communicated its preliminary observations on the proposed capital works programme along with other issues covered in the ERC filings on 06.12.2005. The Commission pointed out that the capital expenditure programme proposed by KPTCL for FY07 is over ambitious considering the average of actual capital expenditure incurred by KPTCL in the preceding 3 years from 2002-03 to 2004-05 which was Rs.493 crores and the average percentage of achievement is about 67% of the programme in those years. Further, with the proposal to meet the entire expenditure of Rs.2700 crores through borrowings, it would adversely affect the debt: equity ratio and debt service coverage ratio and as a result it would be extremely difficult for KPTCL to get funds from financial institutions. After receiving replies from KPTCL to the preliminary observations, the ERC was cleared by the Commission on 16.12.2005 for publication in the newspapers to call for objections from the public.

5. The Commission felt that KPTCL's investment proposal of Rs. 2700 crores for FY07 appeared to be over ambitious compared to past performance, apart from the fact that such expenditure will have substantial financial impact on the sector and tariff to consumers. The Commission felt that there is need to examine the investment proposal independently and therefore appointed an Expert Committee under the Chairmanship of Sri B. G. Rudrappa, Former Chairman, KEB, with the following Members:

1. Sri H.R. Gopal, Former Member, KERC	-	Member
2. Sri P.S. Jagannatha Gupta, Retd. CE, KPTCL	-	Member
3. Technical Director, KPTCL	-	Member
4. Technical Director, KERC	-	Convener.

The Committee was requested to look into the following aspects while examining the proposals:

- Budget provision required in FY07 for works in progress keeping in view time and cost over-run.

- Examine the list of new works proposed to be taken up by KPTCL and to recommend the programme and the budget provision required to be approved by the Commission in the ERC for FY07, keeping in view the perspective plan.
- Any other suggestions regarding the capital works programme.

6. The Committee examined in detail, the proposals made by KPTCL over 10 sittings spread over nearly two months. After obtaining necessary clarifications and information from KPTCL and after examining all aspects, the Expert Committee furnished its Report containing its recommendations on the capital investment programme on 1st March 2006. The Committee's Report was posted on the Commission's web site for the information of the public. The Report of the Expert Committee is enclosed to this Order at **Annexe – 5**.

As against KPTCL's proposal of Rs.2700 crores, the Expert Committee has recommended a total out-lay of Rs. 1755 crores for capital expenditure during 2006-07. The DT, KPTCL has however furnished a separate note stated to be on behalf of KPTCL to be considered as part of the Expert Committee Report. The need for an outlay of Rs. 2700 crores during 2006-07 is reiterated in the said note.

7. Many Objectors have voiced serious concern on the huge capital expenditure programme of Rs. 2700 crores proposed by KPTCL. At the Public Hearing held on 21.03.2006, many objectors raised several issues in the matter and some objectors have filed additional objections in writing. KPTCL has provided its response to all the written objections and the MD/KPTCL also responded in the public hearing. A statement giving the gist of objections filed by various objectors both in writing and also orally during the public hearing and KPTCL's response thereon is enclosed at **Annexe – 2**.

8. Subsequent to the date of public hearing, KPTCL have submitted another letter to the Commission on 21.03.2006, further clarifying the various issues in respect of the Capital works programme appealing to the Commission to consider the request of KPTCL for a capital investment of Rs. 2700 crores permitting them to carry out all the works included in the investment plan for FY07.

9. The major objections filed by the objectors in respect of the Capital Investment programme, the replies by KPTCL, and the Commission's views thereon are discussed below.

10. Objections raised by several objectors which are common in nature are listed below:

i. The capital expenditure programme for FY07 is excessive and unrealistic considering the actual performance in the preceding years. The programme should be restricted to about Rs.500 crores based on past performance.

ii. There is no example of any company investing 3.5 to 5 times their average capital investments in a year and that, such huge investments may result in assets being idle or under-utilised. Usefulness and prudence tests shall be applied while considering such proposals.

iii. KPTCL has not furnished cost benefit analysis for the investment programme. While huge investment has been proposed in FY07, the transmission loss level has been proposed to be maintained at the same level of 4.18%, which is not logical.

iv. KPTCL should complete the ongoing works and prove their capability before seeking a quantum jump.

v. The investment of the order of Rs.2700 crores requires sufficient planning, technological, logistical and manpower resources. KPTCL has not furnished these details.

vi. KPTCL has not furnished its financing plan to meet the capital programme. The mere statement that the same would be met through borrowings from PFC/REC is vague.

vii. Considering the financial position of KPTCL, it is not feasible to get funds to an extent of Rs.2700 crores through borrowings. With the proposed borrowing of Rs.2700 crores, the financial position of KPTCL would become precarious.

viii. The capital investment programme should be an achievable programme and not artificially boosted just to extract higher tariff from consumers.

ix. The massive investment would result in increase in O & M, depreciation and interest charges of KPTCL substantially. This would result in substantial increase in transmission tariff, which will ultimately result in increase in consumer retail tariff. The tariff revision of KPTCL will be followed by tariff revision proposals of ESCOMs.

x. ESCOMs have not given their views on the applications of KPTCL. How the ESCOMs propose to absorb the increase in transmission charges is not known.

xi. Increase of transmission tariff by 34% in one year is against the interest of the consumers.

11. Sri Rangrej, Chairman, Electricity Sub Committee, Gadag District Chamber of Commerce & Industries has contended that all the Expert Committee members are Ex-KPTCL/KPTCL officers. Hence, the report has to be reviewed by an outsider like IISc etc. Also inclusion of Ex-Member of KERC on the Expert Committee is not permissible under the provision of the Acts. A few other objectors also endorsed his view that the Expert Committee consisted of ex-officers of KPTCL only and hence their report may not be impartial. They demanded that the Commission should review the report of the Expert Committee thoroughly before taking a decision or alternately appoint one more committee to independently get the proposal examined.

12. Sri Ravindra Prabhu of KIMA Mysore has stated that the achievement on commissioning of stations for FY06 till October is only 16.52%. The achievement on augmentation of works in FY04 & FY05 is only 19.6% indicating that KPTCL's management of works is highly inefficient.

13. Sri V. Venkatasubba Rao former DT, BESCOM has expressed the view that the proposal appears to be a dream programme and suggested that KPTCL should augment the required resources and strengthen its project management skills while undertaking such massive programme. He also pointed out that the benefits of RLMS schemes undertaken by the ESCOMs which is supposed to reduce the load on the sub-stations does not appear to have been factored in the proposal of KPTCL.

14. The legal counsel of BWSSB stated during the public hearing that KPTCL has proposed the present capital investment programme based on PRDCL study, but the PRDCL study has set only ideal targets without considering the financial capability of the KPTCL. Had the financial capability been considered, the complexion of the study and the present investment proposal would have been entirely different. He urged to consider all the factors including financial capability of KPTCL while approving the programme.

15. Mr. Rahul Pandey of IISc and Sri Gautam Menon of ISEC have opined that the observation of KERC on Debt: Equity ratio is correct. The financial situation of KPTCL with this additional borrowing of Rs. 2700 Crores will become precarious.

16. Sri Shankar Sharma of Mysore has contended that too many projects in one year, without corresponding HR capability may result in lower quality of work and sub-optimal utilisation of resources. He has stated that the cost-benefit ratio and energy savings for many of these 428 projects are not shown in KPTCL submission. He has also expressed a view that except for those projects which have reached tender stage and which have clear benefits of reduction in energy losses, the other projects should be prioritised to make up an overall list of realistic number for the year.

17. Dr. Narasimha Rao, Visiting Faculty, IIM, Bangalore has contended as follows:

i. As per KERC planning criteria, transformer loading need to be at 60%-65% and all distribution components to operate with 75% of thermal limits. The perspective plan of KPTCL has taken into account N-1 reliability criteria and transient stability analysis to determine loading limits. It is not clear how these studies led to final loading limits considered by KPTCL. The proposed excessive transmission investment is based on overly generous safety margins.

ii. The analysis lacks consideration of scenarios/sensitivities of load growth. Assumptions regarding district wise load growth, reduction in losses, open access transactions, growth in decentralized & captive generation etc is not clear from the report.

iii. The need for upgrading sub-transmission system at a large scale in one year rather than incremental up gradation over the years is not justified. Incremental investments would have reduced the tariff impact.

iv. Sub–transmission-loading level could be reduced by alternatives such as reduction of distribution losses, DSM & better Load management. Such alternatives would benefit the consumers.

Coordinated planning between KPTCL & ESCOMs to select least cost alternatives for meeting future demand is required. The current proposal has not provided the comparison of such alternatives.

18. Sri Govindappa former DT, KEB speaking on behalf of FKCCI, contended that most of the transformers proposed for augmentation/replacement are loaded to 70% during peak time, which last for 1-2 hrs in a day. As per the prevailing technical standards the transformers can be loaded up to 100% and also overloaded by 20% for a short duration. Further, in some of the sub-stations the transformers are not in parallel operation. Considering the redundancy available in the existing transformers and the load growth in the range of 7%-10%, such huge investments is uncalled for in the next few years.

19. During the public hearing, on the matter of proposed investment, the Commission also asked KPTCL to clarify (i) Why such a huge investment proposal to take up all the works in one year. Whether it cannot be spread over a period and also prioritised depending upon the availability of funds (ii) How the consumer interests are protected and whether the consumers have been consulted and their paying capacity is examined (iii) What is the financing arrangement for the investment proposal, what are its implications on the tariff.

20. a) KPTCL has provided detailed response to the objections that were received in writing. KPTCL stated in the response that the investment proposal is based on the PRDCL study and further that KPTCL has considered unrestricted scenario to have adequate redundancy in the system for reliability and quality power. The unrestricted peak load is 7007 MW and the peak capability of the transmission system is 6200 MW and hence KPTCL is intending to execute as many works as possible in FY07. KPTCL informs that the new sub-stations have been proposed in consultation with the ESCOMs and that the ESCOMs are also trying to reduce the losses by initiating several measures. Out of the proposed investment, 60% of the new investment is envisaged to improve rural T&D. In the reformed scenario, with a view to give 24 hours power supply in a day to all consumers, it is very essential to establish many more stations to reduce the overloading at the existing stations and to have redundancy. According to KPTCL, it has planned basically to clear the backlog of works that should have been done in the past 10 years. KPTCL have stated that the proposed investment is to the benefit of the consumers as it would reduce loss, improve quality of electricity and create redundancy. The condition of the present transmission system is due to non-investment in the past decade and any reduction in the proposed investment in FY07 would result in continuation of the existing problems. Further, any postponement of investment would increase the cost by almost 30% and would burden the consumers further.

b) Regarding financing plan, KPTCL stated that REC/PFC have agreed to finance the proposal to an extent of 80% of the individual project. KPTCL also stated that it is proposing an IPO of Rs.1000 crores which would result in a favourable debt equity ratio apart from reducing the borrowing from Rs.2700 crores to Rs.1700 crores.

c) On the revision of transmission charges sought, KPTCL has stated that the increase in ARR sought in FY07 is only 3% more than the ARR in FY06. The contention that there would be increase in retail consumer tariff is not correct as it would depend upon over all revenue deficit in the ESCOMs. Regarding cost benefit of the proposed investment, KPTCL has stated that the benefits that would accrue to the consumers would outweigh the investment.

d) KPTCL has stated that past performance need not necessarily be an indicator of future performance. Regarding preparedness of the KPTCL to implement the programme, KPTCL has stated that it has prepared action plan for implementation, has prepared the project estimates and have taken steps for carrying out effective and efficient project management practices. KPTCL has further stated that it has standardised the land acquisition process, 13 new divisions have been created and that KPTCL has arranged to procure the transformers directly from manufacturers to reduce the time of procurement.

e) KPTCL has further stated in the response that KERC has formed an Expert Committee to scrutinise the proposal, which would look into various issues raised by the objectors and that KPTCL has furnished the required details in the ERC and further details to the Expert Committee to justify its proposal.

21. The MD KPTCL in his response during the public hearing has further stated as follows:

a) The power sector in the state is suffering from disease, which requires holistic treatment and not in parts. The existing situation is due to non-investment in the sector. KPTCL could not spend the budgeted investments in the last decade due to poor planning and execution. There are peak constraints in the system and KPTCL is unable to evacuate power in spite of power availability. KPTCL was also unable to evacuate JTPCL power under open access due to transmission constraints. Similar experience is being faced to supply quality power to Wheel and Axle Plant at Yelahanka.

b) The proposed capital works would be done on a turnkey basis, less transformers. The transformers would be procured directly by KPTCL and delivery schedule is synchronised with the execution of work. This would reduce lead-time for transformer procurement.

c) Huge investments are not new in the sector. In UP Rs. 3000 crores is being spent under RGGVY scheme. Therefore opportunity has to be given to KPTCL to prove its efficiency. Approval of Rs. 2700 crores would give leverage to execute at least Rs. 1700 crores of works. Further, the standards of performance specified by the Commission are too high and to meet these standards, investments are necessary.

d) Regarding the financing arrangement, the MD stated that the proposal to raise IPO of Rs.1000 crores has been dropped and KPTCL would raise the required finances from PFC/REC.

e) He stated that according to the Expert Committee there would be savings of 1112 MU in the energy requirement on account of capital investment being undertaken. ESCOMs would factor in these savings in their ERCs. ESCOMs are also trying to reduce the distribution losses and to keep the average distribution loss at about 20% in their filings.

f) On the point raised by few objectors on the loading of transformers etc, the MD stated that theoretical standards set for ideal conditions would be difficult to be adopted in the field conditions in a straight jacket manner.

g) The MD further brought to the notice of the Commission that in order to promote investment, budget is being prepared at thrice the normal requirement in some departments of the Govt and similar approach has been taken by KPTCL in the present proposal.

h) The MD requested the Commission to approve capital programme of Rs.2700 crores as sought by KPTCL and also stated that in the event of funds not being available, no great damage would be done as the loans would be drawn short to that extent.

22. Further, the MD, KPTCL in his letter dated 21.03.2006 furnished after the Public Hearing, has reiterated the submissions made by KPTCL earlier before the Commission/ Expert Committee. KPTCL has stated that even though the previous targets and achievements were less, the same need not be taken as a thumb rule for the basis of future planning. MD has further stated that there need not be any apprehensions about the achievements and that the Engineers are fully geared up to meet the challenging task by adopting the simplified measures to speed up the progress and has urged the Commission to approve the capital programme of Rs.2700 crores for FY07.

23. The Expert Committee has examined the investment proposal of KPTCL in detail and the Committee itself raised several issues which covered many objections raised by the Objectors. A few objections received by the Commission were also placed before the Expert Committee. After examining the various issues, the Expert Committee Report has opined as indicated below:

- KPTCL intends to incur a capital expenditure of Rs. 2700 crores during 2006-07, which is five times the average capital outlay incurred over the last four years. The physical targets are even more stringent. 365 new stations are programmed to be serviced which is about ten times the average annual achievement over the previous four to five years. It has set upon itself a tremendous task. This needs to be appreciated. However it is to be recognized that there are many unforeseen obstacles, one of the most important amongst them being the fund availability. Initially it had mentioned that there will be no difficulty in mobilizing the funds and that PFC & REC have assured whatever assistance is required would be forthcoming. Nevertheless, in the statement submitted to the Commission, it had been mentioned that about Rs. 220 crores would be mobilized in the form of short-term loans during 2005-06. When clarifications were sought, KPTCL has replied that the short-term loan was in the nature of bridge finance. It also clarified that it is attempting to mobilize about Rs. 1000 crores through IPO. It was revealed that this issue is pending with the Government. The Committee still has reservations about KPTCL succeeding to collect Rs. 1000 crores through IPO because of the several formalities involved. The Committee anticipates difficulties in mobilising even Rs. 1755 crores, which is being recommended as the capital budget for the year 2006-07.

- Funding is only one of the problems in the execution of schemes on such a massive scale. The in-house capability to attend to various activities such as drawing specifications, processing of tenders, placing of orders, monitoring the progress of works will have to be strengthened. Mere creation of posts will not suffice. Persons with adequate capability are required and they may be in short supply.
- Acquisition of land and getting the right of way for transmission lines is not going to be an easy task either, in spite of streamlining the procedure. The limitations of contractors and delay in the execution of works due to disputes cannot be ignored. No doubt, KPTCL has furnished a list of 35 contractors. Once having accepted the contract, there are possibilities of at least some of them raising disputes and delaying the works.
- Lastly, monitoring of 779 works is not an easy task. The Committee observed open endedness in respect of several schemes in the Progress Review Report prepared as late as in December 2005. Nevertheless, the Committee has recommended a budget of Rs. 1755 crores, for the year 2006-07, considering the anxiety of KPTCL to clear

the backlog and the measures it proposes to streamline the procedures and expedite the works. Capital Budget has to be deemed as a sacred document. While it is true that deviations are inevitable, these should be kept within reasonable limits say less than 10%, be it financial or physical targets.

24. The Commission had already voiced its reservations in respect of the KPTCL's Capital Investment Programme for 2006-07 during its preliminary observations on KPTCL's ERC filing keeping in view KPTCL's past performance. The Commission has taken note of the opinion and views expressed by the Objectors and also the possible obstacles which KPTCL is likely to face in achieving the massive capital investment programme as opined by the Expert Committee in its Report.

Regarding the objection of a few Objectors on the constitution of the Expert Committee with ex-KPTCL officers and the need to review the investment proposal/ expert committee report again, the Commission is of the view that the members were chosen by the Commission considering their in-depth knowledge of the entire Grid System of Karnataka State and their capability of analysing the massive investment programme proposed by KPTCL in the ERC filing. Regarding engaging a former member of KERC on the Committee, it is to be clarified that there is no such bar in the Electricity Act 2003 and therefore there is no impropriety in the Expert Committee constituted. In the view of the Commission, the Committee has done an excellent job and has given concrete recommendations on the proposal and as such there is no need to review the investment proposal once again or to review the report of the Committee. The Commission would like to place on record the services rendered by the members of the Committee.

The Commission agrees with the view of the KPTCL that past performance need not necessarily be an indicator of future performance, but at the same time such an investment proposal should have been supported by concrete action plan for implementation. While KPTCL has provided a schedule to commission one sub-station each day in FY07, it is not supported by a credible firm financing plan and other resources required to implement such a programme. As against an approved capital programme of Rs.900 crores, the actual expenditure to the end of September 2006 is Rs. 136.75 crores only and according to the KPTCL's own statement the outlay in FY06 is not likely to exceed Rs.500 crores. Therefore past performance cannot be completely ignored while considering the proposal for FY07. The Commission finds merit in majority of the objections and apprehensions of the Objectors. However, the Expert Committee has also examined most of these objections on its own and has given its recommendation. The Commission would like to complement the Objectors for their valuable suggestions.

KPTCL has not explained how the revision of transmission charges sought in FY07 is only 3% increase in ARR over FY06, while the approved ARR in FY06 was Rs.671.80 crore, the ARR sought in FY07 is Rs.991.74 crores

KPTCL has stated that funds required for the proposed programme would be met through loans from PFC, REC etc to the extent of 80% and that KPTCL is not receiving any financial assistance from GoK/GoI. Even if it is assumed that KPTCL would be able to raise finance from REC/PFC to the extent of 80% of the proposed expenditure, this leaves a huge gap of Rs.540 crores being 20% of Rs.2700 crores to be met from own sources. How KPTCL would meet this Rs.540 crores is not explained nor KPTCL has such internal resources. Even to meet a capital expenditure of Rs.1755 crores as recommended by the Expert

Committee, if 80% would be met through borrowings, balance of 20% amounting to Rs. 350 crores would have to be met through other sources.

Regarding KPTCL's proposal to prepare the investment programme at thrice the normal requirement just in order to promote investment, the Commission is of the view that such an approach lacks basic planning and budgeting criteria. As the objectors have pointed out, the planning and budgeting should be a serious exercise considering resources available including technical, financial and commercial considerations and the plan should be capable of achievement with marginal variations.

Regarding the KPTCL's contention that there would be no damage done if the programme is not achieved fully since the loans would be drawn less to that extent, it is very well known that when orders have been placed for procurement of material and execution of works based on budget, and if funds are not available substantially, it will have serious consequences as it will create idle inventory and stoppage of works for non-payment. Such a situation should not be warranted.

The Expert Committee, in order to examine the justification for establishing the new stations as also the augmentation works required, requested KPTCL to make available the existing peak loads of all the 542 Sub-stations in the State. This data was made available by KPTCL and the Committee observed that peak load had reached 70% in 390 stations. The Committee felt that the number may go up during the months of February and March when requirement of electricity from irrigation pump sets reaches a maximum. The Committee has also observed that the established practice is to take action to enhance the capacity of a station immediately after the peak load reached

70% or establish a new station close by to provide relief. The Committee has further opined that the reliability of power supply in case of failure of a transformer in a sub-station is as important as reduction of losses. The recommendations of the Expert Committee have taken care of all these aspects.

25. The Commission has examined in detail the Capital Investment Proposal of KPTCL, the recommendations of the Expert Committee on the investment proposal, objections raised by several objectors, the rejoinders by KPTCL to the objections and finally the points raised by KPTCL in its letter dated 21.03.2006. The Commission observes that the Report of Expert Committee has covered all these issues in detail and has laid emphasis on the importance of :

a) Completion of the entire backlog works which were taken up prior to 2005-06 and during 2005-06.
b) Completion of augmentation works to the existing stations proposed to be taken up during 2006-07.
c) In respect of new works, many stations and lines should be commissioned during 2006-07 and the investment can be minimised during 2006-07 on schemes to be commissioned during 2007-08.
d) Completion of replacement of failed equipment, modernisation of stations, civil works etc.
e) Initiating modernisation of Load Despatch Centre in 2006-07 and completion of the same in 2007-08.

26. The Commission accepts the Report of the Expert Committee and approves the Capital Expenditure programme of Rs. 1755 crores for KPTCL in FY07 as recommended by the Committee. The Commission agrees with the view of the Expert Committee that even raising of funds to the extent of Rs.1755 crores is a difficult task for KPTCL.

The Commission accepts all the recommendations made by the Expert Committee and directs KPTCL to fully implement the recommendations.

27. Allocation of funds as recommended by the Expert Committee are as tabulated below:

Sl.No.	Particulars	Amount allocated in Rs. Crores
1	For 118 Schemes (excluding items 1 to 10) under list 1 which were taken up for implementation prior to 31.03.2005.	312.00
2.	For 35 schemes in List II (a) (each costing more than Rs. 5 crore) and were proposed to be implemented during 2005-06	263.00
3.	For 188 schemes in List II (b) (each costing less than Rs. 5 crore) and were proposed to be implemented during 2005-06	254.00
4.	Cost escalation in respect of the above works	200.00
5.	For 58 augmentation schemes in List II (c)	151.00
6.	For Miscellaneous works in List 1(Sl. no. 1 to 10)	60.00
7.	For other works in List II (c) excluding augmentation works	515.00
	Total	**1755.00**

28. The approval of Capital Budget allocation of Rs. 1755 crores for FY07 is however subject to obtaining prior approval of the Commission in respect of Scheme Reports costing more than Rs. 10 crores. The Commission had earlier fixed the financial limit for obtaining prior approval of the Commission by KPTCL for individual scheme as Rs. 5 crores in the practice directions. KPTCL had requested the Commission to enhance this limit to Rs.15 crores in view of the massive investment proposal involving large number of works costing more than 5 crores in the present ERC, stating that such an approval would facilitate speedy execution of works. The Commission considering the views of KPTCL and also the number of schemes costing more than Rs.5 crores included in the present proposal of KPTCL in the ERC, has approved to enhance the limit to Rs. 10 crores, subject to the following conditions:

i) The works shall be taken up strictly according to the schemes envisaged in the long term perspective plan.
ii) The works shall be taken up only after tying up the required funds for the scheme.
iii) The observations made by the Commission earlier on the large variation in the rates adopted in the DPR, cost benefit ratio and other discrepancies shall be kept in view.
iv) The implementation of the schemes shall be closely monitored to avoid any time and cost overrun.
v) Quarterly progress report in respect of schemes costing more than Rs.5 crores shall be continued to be furnished to the Commission as before.

4.4 Transmission Loss

1. KPTCL in their ERC for FY07 have projected the transmission loss in FY07 as 4.18%. While arriving at the above loss level, KPTCL have considered input energy of 38057 MU and requirement of ESCOMs at the interface points as 36445 MU. The actual transmission loss from FY03 to FY06 is as follows:

Table – 4.1

Transmission Loss

Year	Transmission Loss proposed in the ERC	Transmission Loss approved by the Commission	Actual Transmission Loss
FY03	6.39	6.39	6.835
FY04	6.39	6.00	4.87
FY05	4.87	4.18	4.18
FY06	4.87	4.18	4.12 (up to Dec 2005)
FY07	4.18		

2. In the Tariff Order 2005, the Commission had approved a loss level of 4.18% for FY06 [same as for FY05] considering the approved investment of Rs. 900 Crores and input energy of 35324 MUs.

   KPTCL has furnished monthly transmission loss data to the Commission upto the month of Dec 2005. The reported loss up to December 2005 is 4.12%.

   It is worthwhile here to note that in FY06 the following Stations & lines have been commissioned as on 15.03.2006.

Table – 4.2

Stations Commissioned in FY06

Sl. No	Voltage	Annual Target		Progress Achieved as on 15th March 2006			
		Nos	MVA	Nos	% Achievement	MVA	% Achievement
1	**400KV**	-	-	-	-	-	-
2	**220KV**	7	1250	2	28.57	400	32
3	**110KV**	39	815	14	35.90	230	28.22
4	**66KV**	54	827.50	15	27.78	261.70	31.62
	TOTAL	**100**	**2892.50**	**31**	**31.00**	**891.70**	**30.82**

Table – 4.3

Transmission Lines Commissioned in FY06

Sl. No	Voltage	Annual Target		Progress Achieved as on 15th March 2006			
		Nos	MVA	Nos	% Achievement	MVA	% Achievement
1	**400KV**	-	-	-	-	-	-
2	**220KV**	15	556.590	5	33.33	169.91	30.53
3	**110KV**	40	519.890	9	22.50	82.79	15.92
4	**66KV**	49	619.920	13	26.53	122.91	19.83
	TOTAL	**104**	**1696.400**	**27**	**25.96**	**375.61**	**22.14**

Table – 4.4

Augmentations in FY06

Sl. No	Voltage	Annual Target		Progress Achieved as on 15th March 2006			
		Nos	MVA	Nos	% Achievement	MVA	% Achievement
1	**400KV**	2	815	1	50.00	500	61.35
2	**220KV**	5	715	1	20.00	50	6.99
3	**110KV**	28	335	10	35.71	130	38.80
4	**66KV**	68	1065.30	31	45.59	262.8	24.67
	TOTAL	**103**	**2930.30**	**43**	**41.75**	**942.8**	**32.17**

The Commission notes that in FY06, the achievement reported by KPTCL as on 15th March 2006 shows poor progress, which is more or less to the same extent as in the previous years.

3. As per the PRDCL study report the projected transmission loss upto FY07 is as indicated below:

Table – 4.5

Transmission Loss

Year	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Transmission loss including 33 kV system	6.39	4.86	4.55	4.21	4.13
Transmission loss Excluding 33 kV system	5.77	4.46	4.16	3.88	3.81

But there is shortfall in achievement with reference to PRDCL report.

As per the PRDCL report, the transmission loss upto 33 kV voltage level for FY06 should have been 3.88% with an input energy of 41835 MU. Whereas the actual energy handled during FY06 is 34367 MU (as per daily generation statement), thereby the input energy handled has reduced by 7468 MU and therefore the actual losses should have been substantially less than 3.88%. However, the progress of capital works in FY06 as on 15.03.2006 is around 30%, which is one of the possible reasons for higher loss level in FY06, as compared to the PRDCL report.

4. The loss upto 33 kV level for FY07 as per PRDCL report is 3.81% with an input energy of 44725 MU. As against this KPTCL has estimated the transmission loss of 4.18% for FY07 with an input energy of 38057 MU and with a proposed humungous investment of Rs. 2700 crores. In this context it is worthwhile to note that most of the objectors, in their written submissions as well as during public hearing, have pointed out that KPTCL, in spite of proposed huge investments, has maintained the loss in FY07 at 4.18% i.e. at the same level as in FY05 & FY06, which is not justified. KPTCL, have stated that 1112 Mus is the estimated energy savings due to implementation of these proposed works. It is also stated that most of the benefits due to the proposed investments would accrue to ESCOMs due to shortening of 11KV lines and this would be reflected in their ERC filings.

5. For reduction of transmission & distribution losses, the Commission has furnished a roadmap to CEA as follows:

Year	% loss
FY06	26
FY07	24
FY08	22
FY09	20
FY10	18.5
FY11	17
FY12	15.5

The MD, KPTCL while furnishing his replies during the public hearing, stated that the distribution loss of ESCOMs would come down to around 20% in FY07. The Commission has informed the KPTCL/ESCOMS that the Commission would allow the losses as per the above stated roadmap only, irrespective of any higher loss levels that may be projected by KPTCL/ESCOMs in their future Tariff /ERC filings.

6. Regarding the objections made by the stakeholders, the Commission agrees with the views of the objectors that the huge investment proposed should reflect in reduction of transmission losses at least to some extent. In this context it is to be noted that one of the objectors has pointed out that earlier KPTCL has reduced the losses from 10% in FY01 to 4.18% in FY05 with less investment, whereas KPTCL now has retained the losses at 4.18% in spite of proposed investment of Rs.2700 crores. The Commission notes that in any electrical system the losses cannot be eliminated completely but can be maintained at a minimum level.

7. The Commission notes that KPTCL has shown significant loss reduction since FY01. As against 4.18% stipulated by the Commission and 4.16% as per PRDCL report for FY05, KPTCL has reported an actual loss figure of 4.18% for FY05. Further, in FY06, as against 4.18% stipulated by the Commission, KPTCL has reported a loss figure of 4.12% upto the end of Dec 2005. As per PRDCL report the loss figure for FY06 is 3.88% excluding 33KV system.

8. The entire KPTCL's investment proposal is based on the PRDCL perspective plan which was revised by KPTCL [Version 3 & Version 4] with certain modifications. The proposed investment envisages completing all the works, which are slated, for the tenth plan and eleventh plan periods in one year. However, the Commission, based

on the recommendations of the expert committee, has approved Rs.1755 crores for Capital works program in FY07. Most of these investments encompass the backlog works to the tune of Rs.1029 crores. These backlog works have been basically taken up to release the overload on the existing substations/lines, which in turn has to reduce the transmission losses. Since the proposal of KPTCL is based on revised PRDCL report, the losses should also match with figures recommended in the report. As per PRDCL report the loss level for FY07 should have been at 3.81% excluding 33 kV level and 4.13% including 33 kV level, corresponding to an input energy of 44725 MU. However, as per the ERC filing, KPTCL has projected a loss of 4.18% with the proposed input energy of 38057 MU. Further, in reply to one of the objectors KPTCL themselves have projected a loss level of 4.06% for FY07. However, the expert committee has pointed out arithmetical errors in KPTCL's calculation of losses as 4.06%.

9. KPTCL has requested to retain the losses at the same level of 4.18 % for FY07 also. Considering the reported loss of 4.18% in FY05 and losses up to Dec 2005 as 4.12 % it is observed that, KPTCL's proposal to retain the same level of loss consecutively for the third year at 4.18% is not justified and reasonable. As per the PRDCL report the loss levels should have been at 3.81% excluding 33KV system for FY07. However, considering the load growth and the approved capital investment of Rs. 1755 crores instead of Rs.2700 crores as requested by KPTCL, the Commission is of the view that, transmission loss level of 4.06% as furnished by KPTCL in reply to one of the objectors, upto interface points with ESCOMs is achievable. **Hence, the Commission approves a Transmission loss level of 4.06% for FY07.**

10. The Commission directs KPTCL to furnish monthly reports on transmission losses duly indicating the inter-state and intra- state loss levels separately and also in future ERCs. Further voltage-wise energy

balance reports [from 400 Kv upto interface points with ESCOMs] shall also be filed by KPTCL to the Commission every month.

4.5 Transmission Expenses

4.5.1 KPTCL has estimated the net transmission expenses in the ERC filed on 30.11.2005 as Rs. 991.74 crores as detailed below:

TABLE – 4.6
Transmission expenses Proposed by KPTCL

Rs. crores

Expenditure	As filed by KPTCL	
	Transmission expenses	Total expenses including SLDC
Repairs & maintenance charges	31.85	32.30
Employees cost	181.20	184.70
A& G Charges	40.40	42.05
Other debits	1.05	1.05
Less expenses capitalised	-81.67	-81.67
Depreciation	258.35	260.85
Interest & Finance Charges	318.60	318.60
Prior period credits/debits	1.00	1.00
SLDC Charges(50%)	4.05	
Total Expenses	**754.83**	**758.88**
RoE at 14%	143.14	143.14
Provision for taxation	10.77	10.77
Less other income	24.00	24.00
Net Transmission Expenses	884.74	888.79
Add Advance against Depreciation	107.00	
Total ARR	**991.74**	
Transmission Charge(paise per unit) on 38057.15 MU	26.06	

KPTCL has proposed to include 50% of SLDC charges for determining the Transmission charge and the balance 50% is proposed to be recovered from the Generators. For the purpose of analysing the expenses of KPTCL, the Commission has considered gross expenses including that of SLDC expenses.

a. **Repairs & Maintenance Expenses**

KPTCL has proposed to incur a sum of Rs. 32.30 crores for FY07, which is at the same level as that approved for FY06. The Commission approves the provision as proposed by KPTCL.

b. **Employee Cost**

The proposed employee cost for FY07 is Rs. 184.70 crores against approved expenses of Rs.181.47 crores for FY06. This amounts to an increase of 1.78% over FY06. KPTCL has indicated that during FY07, 500 employees are likely to retire from service and consequently there should have been a corresponding decrease in employee cost. However KPTCL has stated that considering the increase in DA and likely engagement of Asst. engineers and Junior Engineers on contract basis, there will be marginal increase in expenses.

During the public hearing, a few objectors stated that the employee cost of KPTCL should be reduced considering the number of employees retiring and also the employees working in KPTCL doing the work of ESCOMs as stated by KPTCL. They also demanded that KPTCL shall conduct manpower study as directed by the Commission early. A few objectors also stated that KPTCL is repeatedly including expenses that are not allowed by the Commission in the earlier orders and the Commission should not allow such expenses. The MD/KPTCL responding to the objections stated that staff allocation to the ESCOMs and their absorption would be finalized shortly and one of the reasons for increase in employee cost of KPTCL is that provision for terminal benefits is being made in KPTCL's books to the extent of short release of amount by GoK towards the pension contribution committed by the GoK. However, no such provision for additional pension contribution has been made in FY07, as seen from the ERC.

The Commission has not been allowing Bonus/ex-gratia and cost of free/subsidized supply of electricity to its employees for pass through in tariff for the reasons discussed in the earlier orders. For the same reasons, the Commission would not allow these expenses for pass through in tariff in the present order. The proposed expenditure includes bonus of Rs. 1.35 crores. The details of expenses towards free/subsidized electricity are not indicated separately in the ERC. Hence the Commission has estimated this amount as Rs. 0.39 crores as in the previous order. After deducting these amounts, the Commission allows the employee cost as Rs. 182.96 crores for FY07.

c. Administration & General Expenses

KPTCL has proposed a sum of Rs. 42.05 crores towards A & G expenses as against Rs.41.86 crores approved for FY06 which accounts for an increase of 0.45% over FY06. The Commission approves the same.

d. Depreciation

1. KPTCL has proposed the provision for depreciation as Rs. 260.85 crores by following the rates of depreciation as per the MoP Notification issued in 1994 and has also sought advance against depreciation amounting to Rs.107 crores to meet the debt repayment obligation. In pursuance of the National Tariff Policy issued by the GoI on 06.01.2006, the Commission had proposed amendment to KERC (Tariff) Regulations 2000 according to which depreciation should be charged at the rates prescribed by CERC, vide their Notification dated 26th March 2004. Accordingly KPTCL was requested to revise their ERC keeping in view the proposed amendments. However, KPTCL in their letter dated 7th March 2006 have urged the Commission not to amend the Tariff Regulations, as the revised rates of depreciation would reduce the depreciation provision by Rs.140.52 crores KPTCL has

stated in the said letter that it would like to retain the depreciation figures filed in ERC stating the following reasons:

a) The rates of depreciation indicated in the CERC Regulations are very low compared to the existing rates as per the rates notified by MoP/GoI in 1994.
b) The Depreciation charged to the P & L Account every year is available as internal source for debt servicing. Even with the existing rates of depreciation the internal sources are not sufficient to meet the requirement of debt servicing and in view of this, KPTCL has sought advance against depreciation in the ERC for FY07.
c) The Regulator has the responsibility to safeguard the financial health of the Licensee by ensuring flow of requirements of funds for meeting its obligations,
d) There is no alternate means for KPTCL to mobilise this loss of revenue due to the reduction in rates of depreciation as well as excluding Advance against Depreciation. There will be an overall reduction of Rs.247.52 crores (Rs.140.52 crores in depreciation and Rs.107 in advance against depreciation.

2. An extract of Tariff Policy issued by GoI in the matter of Depreciation is given below:

"Para 5.3 (c) **Depreciation**

The Central Commission may notify the rates of depreciation in respect of generation and transmission assets. The depreciation rates so notified would also be applicable for distribution with appropriate modification as may be evolved by the Forum of Regulators.

The rates of depreciation so notified would be applicable for the purpose of tariffs as well as accounting.

There should be no need for any advance against depreciation.

> Benefit of reduced tariff after the assets have been fully depreciated should remain available to the consumers."

3. From the above Policy, it is clear that that the depreciation rates notified by the CERC would be applicable to transmission companies without any modification. The Commission notes that CERC has already notified the depreciation rates for the transmission assets in notification dated 26th March 2004 and hence the same shall be applicable to KPTCL also. Accordingly, the Commission has amended the KERC (Tariff) Regulations 2000 adopting the rates of depreciation as notified by CERC in notification dated 26.03.2004, and has finalised the amendments.

4. Hence, KPTCL shall be entitled for FY07 the rates of depreciation on assets at the rates notified in CERC Regulations. Thus, the allowable depreciation for FY07 is Rs. 120.33 crores (Rs. 260.85 as estimated in the ERC - Rs. 140.52 reduction on account of lower rates of depreciation as intimated by KPTCL in letter dated 07.03.2006), which is approved by the Commission.

e) Advance Against Depreciation

1. KPTCL has sought advance against depreciation amounting to Rs.107 crores in the ERC stating that the amount of depreciation at the existing rates (MoP rates) is insufficient to meet the debt obligation. As per the ERC Format T-9 pertaining to Loans and Interest payments, the net loan repayment of KPTCL during FY07 is indicated as Rs. 367.85 crores after excluding loan repayment pertaining to ESCOMs/GoK amounting to Rs. 252.85 crores. The loan repayment includes repayment of short-term loans to commercial banks amounting to Rs. 228.10 crores. Thus, if the short term loan repayment is excluded, the

actual repayment towards long-term loans of KPTCL would be Rs. 139.75 crores only. (Rs.367.85 crores – Rs.228.10 crores)

2. KPTCL in their letter dated 07.03.2006 referred to in the preceding section, while requesting the Commission to retain the rates of depreciation as per MoP notification, had also requested to provide for advance against depreciation to cover the loan repayment obligation.
3. Many objectors have objected to the advance against depreciation sought by KPTCL in the ERC quoting the specific provision of the Tariff Policy, stating that the transmission charges would increase by 2.81 paise per unit if this advance is also allowed as sought by KPTCL. They have urged the Commission not to allow this provision. KPTCL have responded by explaining the need for the advance against depreciation. To a specific query by the Commission in the hearing, the KPTCL clarified that all the debt repayment obligation of ESCOMs and GoK are being met by the ESCOMs and GoK respectively and are no longer being serviced by KPTCL. KPTCL also stated that all the assets and liabilities have been transferred to the respective ESCOMs.

4. The Commission notes that while the CERC (Terms & Conditions of Tariff) Regulations 2004 notified on 26.03.2004 provides for advance against depreciation to cover the debt repayment obligation, the Tariff Policy issued by GoI specifies that "There should be no need for any advance against depreciation". The Commission finds merit in the argument of KPTCL that advance against depreciation would be required to meet the debt repayment obligation, as otherwise, there is no other means to raise the finance to meet this obligation. The Commission notes that with the depreciation rates as notified by CERC, advance against depreciation would be required to meet the loan repayments. Only when very long term loans are

available for power projects, advance against depreciation may not be required.

5. Accordingly, the Commission has amended the KERC (Tariff) Regulations 2000 and finalised the same duly providing for advance against depreciation to the extent necessary to meet the long-term loan repayment.

6. However, it would not be permissible to provide for advance against depreciation to meet short-term loans for working capital. What is admissible for the short term borrowings for working capital is essentially interest on such loans. In fact, as per CERC norms, interest on working capital is allowable only on normative working capital requirement. The Commission has been allowing interest on short terms loans as sought by the utilities in the ERCs to meet the working capital requirement. The working capital requirement of Rs. 200 crores indicated by the KPTCL in the ERC for FY07 appears to be high on a turn over of 900 crores transmission expense. The Commission has proposed to introduce MYT approach from FY08 in which the Commission has proposed the working capital norms. Therefore, as in the past, the Commission while allowing interest on working capital requirement as sought by KPTCL in the present ERC, would like to make it clear that advance against depreciation is not permissible on short term borrowings.

7. Therefore, out of the net loan repayment of Rs. 367.85 crores indicated in the ERC of KPTCL, if the short term loan repayment amounting to Rs.228.10 crores is excluded, the long term loan repayment amounts to Rs. 139.42 crores. After deducting the depreciation provision of Rs. 120.33 crores, the extent of advance against depreciation admissible would be Rs.19.42 crores only, which the Commission approves.

8. KPTCL is required to compute the depreciation for FY07 as per the rates indicated in the amended tariff regulations. Therefore, the amount of depreciation for FY07 and the advance against depreciation allowed now may vary when actuals are computed at the end of the year since there is change in method of computation as well as the rates of depreciation. The Commission would allow the difference of depreciation / advance against depreciation now allowed and the actuals for FY07 to be carried forward to the next ERC.

f) Interest & Finance Charges

1. KPTCL has proposed an amount of Rs. 318.60 crores towards Interest & Finance Charges for FY07. It is stated by KPTCL that projection for Interest and finance charges for FY07 is based on present profile of loan and also additional funds likely to be drawn from various funding agencies for the capital works programme for FY07. KPTCL has stated that the weighted average rate of interest reckoned for estimation of interest is 8.75%.

2. KPTCL has proposed a capital investment of Rs. 2700 crores for FY07 and the same is proposed to be financed through borrowings from PFC and REC and other financial institutions. When the Commission had pointed out the adverse debt: equity ratio for KPTCL than what is stipulated in the CERC norms with the proposed means of financing the capital programme, KPTCL had informed the Commission/ Expert Committee that it proposes to raise Rs.1000 crores through Initial Public offer (IPO) of shares which would normalize the DE ratio. In the public hearing, a few objectors asked the KPTCL whether any market survey has been conducted by KPTCL on the proposed IPO for which the MD/KPTCL responded that the IPO route has been dropped.

3. As discussed in para 4.8 the Commission has approved capital investment of Rs. 1755 crores for FY07. With the reduction in the approved capital programme by Rs.945 crores, there will be reduction in borrowing to an equal extent. After reducing the interest burden on Rs. 945 Crores (at 8.5% for 6 months), the interest burden will get reduced by Rs. 40.16 crores. The Commission therefore approves a sum of Rs. 278.44 crores towards interest & Finance Charges for FY07 (Rs. 318.60 crores – Rs.40.16 crores) which amount includes interest on short-term borrowings as sought by KPTCL.

g) Expenses Capitalised

1. KPTCL has proposed capitalisation of Rs. 57.87 crores towards interest and Rs. 23.80 crores towards other expenses totaling to Rs. 81.67 crores. With the reduction in interest charges by Rs.45.81 crores, the capitalization of interest would also reduce. Accordingly, the Commission approves capitalization of interest to an extent of Rs.49.55 crores (on pro-rata basis) and other expenses of Rs.23.80 crores, totaling to Rs. 73.35 crores for FY07.

2. In the ERC, KPTCL has stated that the projection of capitalization of interest and finance charges and other expenses for FY07 is on the basis of ratio of interest and other expenses capitalized to total interest and other expense in FY06. The Commission pointed out that since the interest on loans is substantially increasing in FY07 because of proposed capital expenditure, and that the new works proposed are major works in nature, capitalization of interest on the basis of previous years ratio may not be appropriate and hence interest on capital works shall be proposed for capitalization more appropriately. KPTCL shall take action accordingly.

h) Other Expenses

The Commission allows a sum of Rs. 1.05 crores as other debits proposed by KPTCL.

i) Return on Equity (RoE)

1. In Tariff Order 2005, the Commission had allowed a RoE of 12% to KPTCL. KPTCL has proposed RoE of 14% in their present ERC and has requested the Commission to consider the same in the light of the National Tariff Policy, which states that the Rate of Return notified by CERC for Transmission may be adopted by SERCs.

2. Many objectors have taken strong exception to the KPTCL's proposal stating that (i) 12% being provided itself is very high when compared to prevailing interest rates (ii) The performance of KPTCL can not be compared with that of PGCIL/central utilities to get equal return (iii) The tariff to the consumers would go high with such increases etc.

3. KPTCL has responded to the objections stating that 14% ROE sought is as per CERC norms and that there cannot be two sets of norms one for central utilities and the other for KPTCL, apart from stating that higher return would be required to meet the internal resources portion of the capital programme etc.

4. While the Commission agrees with the views expressed by the Objectors that allowing a higher RoE would marginally increase the tariffs, the Tariff Policy issued by GoI specifies that SERCs shall follow the RoE as notified by the Central Commission for generation and transmission projects. The Commission also finds merit in the arguments advanced by KPTCL that norms applicable to central utilities should be adopted for the state utilities also. It should be noted that according to the Tariff Policy, uniform norms would be applicable

both for central and state transmission utilities not only in respect of RoE, but in respect of all other norms including operating norms. The Commission has adopted the rates of depreciation as notified by the CERC in the Tariff Regulations. The Commission has also proposed adoption of other norms/parameters as notified by CERC for the transmission company in the MYT approach.

5. In view of the above, the Commission approves RoE at 14% to KPTCL. KERC (Tariff) Regulations has been amended accordingly and has been notified by the Commission.

6. In the ERC of FY07, KPTCL has indicated the net worth as Rs.483.85 crores as on 31.03.2006 comprising of share capital of Rs.682.55 crores and negative reserves of Rs.198.70 crores. However, KPTCL has computed RoE at 14% as Rs. 143.14 crores, which means they have computed the RoE on a equity base of Rs. 1022.43 crores. Against the net worth of Rs.483.85 crores projected in the ERC as on 31.03.2006, the basis on which the equity base of Rs.1022.43 crores has been arrived at by KPTCL has not been indicated. In view of the above, the Commission would consider the share capital of Rs. 682.55 crores as on 31.03.2006 as indicated in ERC for allowing 14% RoE for FY07, without considering the negative reserve projected for FY06. Accordingly, the Commission allows RoE of Rs. 95.56 crores for FY07.

j) Prior period Credits/Debits

KPTCL has indicated a sum of Rs. 1 crore against prior period Credits/Debits. The Commission allows the same

k) Other Income

KPTCL has proposed other income as Rs. 24 crores for FY07. KPTCL had projected the other income as Rs.68.40 crores in the ERC for FY06 which was approved by the Commission in Tariff Order 2005. However, KPTCL has revised the other income to Rs.23.72 crores for FY06 in the present ERC. KPTCL has stated in the ERC that incentives from generators for prompt payments, etc were included in the projection of other income for FY06 which are now excluded and the estimate revised to Rs.23.72 crores The same level of other income has been projected for FY07. Accordingly, the Commission allows the other income for FY07 as Rs.24 crores

l) Provision for Taxation

KPTCL has made provision for taxation at Rs.10.77 crores in the ERC for FY07, which the Commission allows.

m) SLDC Expenses

As indicated earlier, KPTCL has proposed recovery of 50% of SLDC expenses through transmission charges and the balance 50% from Generators. The Commission, in Tariff Order 2005 had approved recovery of 50% of SLDC charges through transmission charges of KPTCL and the remaining 50% was allowed to be recovered from ESCOMs. Since, the SLDC has been continued under KPTCL and an independent SLDC is yet to be established in the State, recovery of SLDC charges from the generators directly would not be applicable. Therefore, the Commission allows recovery of 50% of SLDC charges from KPTCL through transmission charges and the balance 50% from the ESCOMs as in Tariff Order 2005. (The total SLDC charges for FY07 is Rs.8.10 crores which is already included under the expense of KPTCL).

4.6 Approved Transmission Expenses

Based on the above discussions, the details of transmission expenses as proposed by KPTCL and expenses as approved by the Commission for FY07 are indicated in the following Table:

TABLE – 4.7

Approved Transmission Expenses for FY07

Rs. crores

Expenditure	As Proposed by KPTCL	As approved by the Commission
Repairs & maintenance	32.30	32.30
Employees cost	184.7	182.96
A& G Charges	42.05	42.05
Other debits	1.05	1.05
Less expenses capitalised	-81.67	-74.37
Depreciation	260.85	120.33
Interest & Finance Charges	318.60	278.44
Prior period credits/debits	1.00	1.00
Provision for Taxation	10.77	10.77
Total Expenses	769.65	594.53
RoE	143.14	95.56
Less other income	-24.00	-24.00
Net Transmission Expenses	888.79	666.09
Advance against Depreciation	107.00	19.42
Total Transmission Expenses	995.79	685.51
Less SLDC charges (50%	4.05	4.05
Net Transmission Expenses	**991.74**	**681.46**

4.7 Approved Transmission Charges

1. KPTCL have requested for approval of Transmission charges based on the gross energy stating that KPTCL is dispensed with the bulk power business and the entire energy is accounted in the ESCOMs only. The Commission has examined this issue and is of the view that before changing the methodology, the following issues have to be addressed (i) If the transmission charges are allowed on gross energy,

theoretically, there may not be any initiative on the part of KPTCL to reduce transmission losses further as they are not incentivised (ii) In case the actual transmission loss is less than the approved level, how the savings in the power purchase cost has to be shared between the KPTCL and the ESCOMs and on the contrary, if the actual loss level is more than the approved level, how the additional loss has to be shared. These issues have been proposed to be addressed by the Commission in the MYT approach which would be examined separately.

2. Since the electricity is delivered to the ESCOMs at the interface points and a uniform transmission loss has been adopted, as in the previous orders, the Commission would consider computing transmission charges on the net energy delivered at the interface points in the present order.

3. KPTCL has projected the energy input for FY07 as 38057 MU in the ERC and the net energy to be delivered to the ESCOMs as 36445 MU after a transmission loss of 4.18% and auxiliary consumption of 21 MU. The approved energy input for FY06 was 35324 MU in Tariff Order 2005. Therefore, the projected input energy for FY07 is 7.74% over the approved estimate for FY06. The actual energy input for FY06 is 34367 MU (As per daily generation statement), which means the projected input for FY07 is higher by 10.73 % over actuals of FY06.

4. Many objectors have stated that the energy input projected for FY07 is higher when compared to approve input for FY06. KPTCL has not provided source-wise details of power purchase in support of their energy input projection. The Commission would examine in detail the energy input projection for FY07 while processing the ERCs of ESCOMs, which would include power purchase details. At this stage, the Commission would consider the energy input projection made by

KPTCL in the ERC for computing the transmission charges. After deducting transmission loss at 4.06% as approved by the Commission in the preceding paragraphs and after deducting auxiliary consumption of 21 MU, the net energy to be delivered at the interface points of ESCOMs works out to 36491 MU.

5. Details of transmission charges proposed by KPTCL and as approved by the Commission are as follows:

As per KPTCL:

Total Transmission Expenses	:	991.74 crores
Energy Handled	:	38057 MU
Transmission charges per Kwhr	:	26.06 Paise per unit

As per the Commission

Total Transmission Expenses	:	681.46 crores
Energy at interface points	:	36491 MU
Transmission charges per Kwhr	:	18.675 Paise per Kwh

KPTCL has taken up a massive capital investment programme for the FY07 and it requires considerable amount of internal resources to meet the capital investment programme during FY07. There may be variation in depreciation / advance against depreciation between the present estimates and actuals for FY07 as discussed earlier. For these reasons, the Commission approves to retain the existing transmission charges. Accordingly, **the Commission approves the transmission charges as 19.42 paise per unit for FY07 for the energy delivered at the interface points of ESCOMs.**

4.8 Transmission Charges under Open Access

1. **Transmission Charges for Long term Customers**:

As indicated earlier, the total transmission expenses approved by the Commission for KPTCL for FY07 is Rs. 681.46 crores. The expected peak load in FY07 as estimated by KPTCL is 6495 MW based on load factor of 66.89%. Hence the transmission charges payable per MW per year works out as Rs.10.50 lakhs.

Accordingly, the Commission approves the transmission charge payable in cash by long term customers under open access as Rs. 10.50 lakhs/MW per year [after rounding off].

2. **Transmission Charges for Short-term Customers**

The transmission charge payable in cash by short-term customers would be as follows:

(i) Short Term Rate [ST rate] = 0.25* (Transmission expenditure/Annual peak]/365)

= Rs. 720/MW/day (after rounding off)

(ii) Short Term Rate for Upto 6 hrs in a day in one block

= 0.25 * ST rate=Rs. 180/ MW [After rounding off]

(iii) Short Terms Rate for more than 6 Hrs and upto 12 hrs in a day in one block:

=0.50 * ST rate=Rs. 360/ MW [After rounding off]

(iv) Short Term Rate for more than 12 Hrs and upto 24 hrs in a day in one block:

= equal to ST rate= Rs.720/MW

The Commission approves the above rates.

3. Transmission Charges in Kind

In addition to the above transmission charges payable in cash, both the long-term & short-term open access customers have to pay transmission loss in kind. According to the Tariff Policy, the transmission loss should be charged on the basis of average losses applicable to relevant voltage level. Accordingly, the Commission considers to charge the transmission loss on the average loss at the particular voltage level.

KPTCL has estimated the voltage-wise percentage loss in the transmission system as follows in FY07 as furnished in the reply to the objectors:

Voltage level	% loss
400 kV	0.79
220 kV	1.76
110 kV	0.26
66 kV	0.60
Transformer no load loss	0.66
Total loss	4.06%

Note: Loss at each voltage level is expressed as percentage of input energy to the system

From the above table, the Commission notes that there are some discrepancies in the estimated loss level at different voltages. While the loss at 400 KV level is shown as 0.79%, the loss at lower voltage i.e. 220 KV is shown as 1.76% and at 110 KV as 0.26%. KPTCL may review the above estimates.

Based on the above estimates of KPTCL and the approved loss level of 4.06% for FY07, the Commission approves the voltage-wise loss levels as indicated below:

Voltage level	% Loss
400 kV	0.95
220 kV	2.10
110 kV	0.30
66 kV	0.71
Total loss	4.06%

Note: Transformation loss allocated to various voltage levels on prorata basis

The actual loss percentage chargeable to open access customers depends upon the point of injection and point of drawal.

If the injection & drawal are at the same voltage level, the loss level of that voltage level shall be considered.

Example: If injection is at 220 kV & drawal is also at 220 kV, the 220 kV loss level of 2.10% shall be charged.

Similarly, if the injection & drawal are at different voltage levels, the loss level of injection voltage level and loss level of drawal voltage level shall be added to obtain the loss level chargeable. The Commission has adopted this approach to encourage Open Access.

Example: If injection is at 220 kV & drawal is at 66 kV, the 220 kV loss level and 66 kV loss level only shall be added and charged. ie 2.10+0.71=2.81% shall be charged.

As stated earlier, the Commission has observed certain discrepancies in voltage-wise loss levels furnished by KPTCL. Hence, the Commission directs KPTCL to tile voltage-wise energy balance reports (from 400 Kv upto interface points with ESCOMs) to the Commission every month.

The 2nd phase of Open Access for 5 MW & above and voltage level of 33 kV & above is being implemented from 01.04.2006. The charges applicable to distribution network and surcharge under Open Access are being determined separately by the Commission.

4.9 Commission's Order

1. In exercise of the power conferred on the Commission by sub-section (10) of section 27 of the KER Act read with section 62 of the EA 2003, the Commission hereby notifies the KPTCL that the tariff proposals placed before the Commission by KPTCL are not accepted in full for the reasons as discussed in detail in this Order. The Commission further notifies KPTCL that the tariff as approved in this Order shall be implemented.

2. The tariff as approved in this order shall come into effect from 1st April 2006 with due notification as required under the EA 03.

3. This Order is signed, dated and issued by the Karnataka Electricity Regulatory Commission at Bangalore on this day the 7th April 2006.

Sd/-	Sd/-	Sd/-
(K.P.Pandey)	**(H.S.Subramanya)**	**(S.D.Ukkali)**
Chairman	**Member**	**Member**