

**KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM**

Present: Shri. K.J.Mathew, Chairman
Shri. P.Parameswaran, Member
Shri. Mathew George, Member

May 2, 2012

Petition No. OP 2/2012

In the matter of

ARR & ERC of M/s Technopark, Thiruvananthapuram for 2012-13

M/s Technopark, Thiruvananthapuram. --- Petitioner

ORDER

1. M/s Technopark, Thiruvananthapuram, is a deemed distribution Licensee for distribution of electricity in the Technopark campus. The Park has now four phases viz., Phase I is the existing park. Phase II campus is leased out to Infosys and UST Global. Phase III extending 93 acres of land is adjacent to phase I. Phase IV is the Technocity. Technopark, Kollam is also a part of its expansion.
2. M/s Technopark filed its ARR & ERC for the year 2012-13 on 28.12.2011. The petition was incomplete as per the provisions of KSERC (Tariff) Regulations 2003. This was rectified subsequently and the clarifications sought by the Commission were also provided by the licensee vide its letter dated 10.02.2012. The summary of the petition is given below:

ARR &ERC projected for the year 2012-13

Category	2010-11 (Actual) (Rs. in lakhs)	2011-12 (Approved) (Rs.in Lakhs)	2012-13 (Projected) (Rs.in Lakhs)
Power Purchase cost	2100.57	2491.23	2820.16
Interest & Finance charges	66.23	59.60	59.03
Depreciation	101.03	103.16	177.52
Employee costs	14.11	14.27	15.70
R & M Expenses	102.71	92.32	129.78
A & G Expenses	44.81	47.98	60.19
Return on Investment	0.00	10.00	0.00

Category	2010-11 (Actual) (Rs. in lakhs)	2011-12 (Approved) (Rs.in Lakhs)	2012-13 (Projected) (Rs.in Lakhs)
Total expenditure	2429.46	2818.56	3262.38
Revenue from tariffs	2289.72	2815.20	3147.26
Non – Tariff Income	23.96	25.75	28.00
Total Revenue	2313.68	2840.95	3175.26
Revenue surplus/(gap)	(115.78)	22.39	(87.12)

3. The revenue gap projected for 2012-13 is Rs.87.12 lakh before Return on Investment, which will increase to Rs.1177.12 lakhs with Return on Investment. The actual revenue gap for 2010-11 was Rs.115.78 lakh while the approved ARR & ERC for 2011-12 shows a surplus of Rs.22.39 lakh.

Hearing on the petition

4. Public hearing on the petition was held on 27.02.2012 at Park Centre. Technopark campus. Besides the licensee, representatives of some consumers and KSEB were present. Representing M/s Technopark, the General Manager (Technical) and Deputy Finance Officer, presented the petition. The Kerala State Electricity Board presented their objections/observations on the petition. The Board pointed out that the licensee is seeking approval for capital investment for different phases costing about Rs.101.67 crores. The proposed capital investment is abnormally disproportionate to the expected increase in consumer strength, which is projected as 50. Listing out the investment in various phases of the licensee, the Board, pointed out that the huge investment now undertaken is for catering to a very small addition of consumer base. Further, expenditure for internal electrification of IT buildings shall not be part of the investment. According to the Board, cost-benefit analysis has to be done for justifying the investment. High level of capital investment does not in any way lead to a situation of reduction in BST and hence the Board advocated for benchmarking the capital cost. The projected ROI of Rs.1090 lakhs, if allowed, will be a burden on the consumers of KSEB ultimately. The AT&C loss projected as 4% is more than the actual figure of 2.95% for 2009-10. Hence the same should be allowed at the same level as that of 2009-10.
5. The licensee furnished the written reply on the objections/observations of the Board vide their letter dated 02.03.2012. The entire power requirement of Technopark is presently met by KSEB. The contract demand is 15 MVA at 110kV. The present maximum demand is around 13 MVA. Distribution of

electricity in Phase I campus is through four 11 kV feeders from 110 kV substation at Kazhakuttam which is operated and maintained by KSEB. Phase II and phase III campuses are supplied from a 110 kV substation operated and maintained by Technopark. The Kollam campus proposes to receive power from the 220kV substation, Kundara through 110 KV underground cables. According to the licensee, Technocity project is the largest IT project of Kerala. The Capital expenditure projected is not exclusively for 2012-13 and 100% capacity utilization can be achieved only gradually. The comparison made by the Board with the number of consumers and investment is not correct unless the space is completely utilised/occupied. Such comparison is more meaningful with present power requirements. The capital investment proposed for Phase I and phase III are much lower than the investments planned for Technocity, where a new campus is being set up with common facilities like main receiving substation etc., to be installed. The capital expenditure proposed is one time investment meant for serving the consumers over a long period. Technopark phase I, which is 20 years old, requires certain augmentation/ modifications for providing power to consumers. Robust 11 KV power distribution system is being set up in phase III for attracting new IT companies. The major investment in Kollam campus is the installation of UG cable from Kundara 220 KV substation to the Tecnopark,. EHV UG cable is the only feasible option for drawing power to the campuses. This work in Kollam campus has been entrusted to KSEB on work deposit basis. The major portion of investment in Technocity is for laying EHV UG cable. Energy auditing, replacement of meters and Microsync Power Management System etc. are meant to reduce the system losses. STATCOM project is jointly implemented by CDAC and Technopark with 100% central assistance. Technopark needs to bear only 29 lakhs for providing interconnection of STATCOM units with Technopark grid. The Electrification of IT buildings is meant for providing Multi Tenant Facility (MTF) for tapping power from each floor through bus risers and not the internal wiring of the premises. The internal wirings are to be done by the tenants.

6. Further, it is not possible to meet the investment with consumer contribution alone, since major portion of the investment is not exclusive for particular consumer. At present employee cost and interest of the on-going projects are considered as part of the work in progress and are capitalised on completion of the projects. Regarding Return on Investment, it is estimated based on the provisions of Electricity Act. Higher distribution loss is due to consideration of loss of three 110/11KV power transformers.

7. **Capital Investment proposed by the licensee** : The Licensee has proposed the following Capital Investment plans for the FY 2012-13 for its various phases:

Phase I

Sl No.	Project Description	Amount (Rs.lakhs)	Source of Fund
1	Augmentation of SS-1A 11 KV Sub Station	60.00	Own Fund
2	Installation of 11 KV, 3RxlCx 500 sqmm XLPE cable	30.00	Own fund
3	Modification works at 110 KVS/S at Technopark	20.00	Own fund
4	Up gradation of electrical protective devices & connected equipment in HT panels	15.00	Own fund
5	Conducting energy audit	9.00	Own fund
6	Replacement of electromechanical meters with Static meters	2.00	Own fund
7	Electrical infrastructure works associated with installation of STATCOM units.	5.00	Own fund
	Total	141.00	

Phase III

Sl. No.	Project Description	Amount (Rs.lakhs)	Source of Fund
1	Electrification of one million sqft IT building	350.00	Loan from consortium of banks
2	11 kV Power distribution System for Technopark Phase III Campus	100.00	- do -
	Total	450.00	

Technopark, Kollam

Sl No.	Project Description	Amount (Rs.lakhs)	Source of Fund
1	Power distribution	100.00	NABARD Loan
2	Additional Electrification work	12.00	- do -
	Total	112.00	

Technocity

Sl. No.	Project Description	Amount (Rs.Lakh)	Source of Fund
1	110 KV UG cable laying	5560.00	Consortium of Banks
2	11 /433KV Unitized Substation	50.00	- do -
3	110/33/ 11 KV substation	500.00	- do-
	Total	6110.00	

8. The details provided by the licensee for investment proposals for Phase III and Technocity, which are green field projects, are inadequate. The licensee has to provide the comprehensive details of the project with yearwise investment, source of funding etc., for the approval of the Commission. Regarding Phase I, the licensee has stated that Rs.110 lakhs out of the Rs.141 lakh proposed, is for

giving power connection to M/s.TCS. The licensee has to realise the amount for effecting power connection to a consumer as per the provisions of the Supply Code and only the balance portion can be included as part of the ARR. The licensee has to provide the details at the time of truing up for inclusion in the ARR. Generally energy audit studies are part of revenue expenditure, unless specific asset are created as a part of this energy audit for increasing the efficiency of the system.

Analysis and decision of the Commission

9. After considering the materials filed by the licensee, the comments of the Board, clarifications and the written reply furnished by the licensee thereon, the Commission has approved the ARR&ERC of the licensee in the following manner.

10. **Energy Sales and distribution loss:** The projected consumption of the licensee for 2012-13 is 70.32 MU against the approved sales of 60.50 MU for 2011-12. The increase projected from the previous year is 16.23%. According to the licensee the increase in sales is expected due to addition of consumers in Phase I, II & Kollam. The number of consumers is expected to increase from 451 to 498 in 2012-13. New consumers are expected in Tejaswini, Leela Infopark, Amstor in phase I. Further TATA Consultancy Services (TCS) and CDAC are expected to start functioning this year. Phase II campus with one million Sq. feet built-up area will start functioning during the year. The new consumers are also expected to occupy Technopark, Kollam Campus. In the light of the above details the projected sales of 70.32 MU is accepted.

Power requirement projected by the licensee

Technopark Phase - I	Technopark Phase – II & III	Technopark Kollam	Technocity	Total
14 MVA	1.8 MVA	1.39 MVA	--	17.19 MVA

Technopark Phase III and Technopark Kollam have not yet started functioning. The Phase III and Kollam are expected to start functioning in 2012-13. The Licensee has not tied up the power supply for these additional requirements.

11. Total energy purchase projected by the licensee for 2012-13 is 73.25 MU and the projected distribution loss is 2.93MU ie., about 4%. The approved distribution loss for 2011-12 was 4%. The licensee has reported various measures taken to bring down the distribution loss. Microsync power management system is installed in

the main 11kV incoming feeders to monitor the power consumption and assessment of losses. Non-functioning and sluggish electromagnetic type energy meters are being replaced with electronic energy meters/Trivector meters for accurate measurement of energy consumption. The benefit of capital expenditure for loss reduction should be passed on to the consumers as they have to bear the cost of investment. However, considering the transmission loss incurred by the licensee in addition to the loss in the distribution net work, loss of the licensee for the year 2012-13 is fixed at 4% as done in the previous year. Accordingly the energy requirement for the year 2012-13 shall be 73.25 MU as shown below:

Approved distribution loss and energy requirement

Description	2011-12	2012-13	
	Approved	Projected	Approved
Energy Sales (MU)	60.50	70.32	70.32
Power Purchase (MU)	63.02	73.25	73.25
Distribution loss (MU)	2.52	2.93	2.93
Distribution Loss %	4.00%	4.00%	4.00%

12. **Power purchase Cost:** The licensee has projected Rs.2820.16 lakhs as the power purchase cost for 2012-13. The estimates of the licensee is given below:

	2012-13		
	Unit	Projected	Approved
Energy Requirement	MU	73.25	73.25
Demand	MVA	17.19	17.19
Fixed Charge @Rs.245/kVA	Rs. lakhs	505.43	505.39
Energy Charges @ 3.16/Kwh	Rs.lakhs	2314.73	2314.73
Total Charges	Rs. lakhs	2820.16	2820.12

The Commission approves the power purchase cost as projected by the licensee.

13. **Interest and Finance Charges :-** The licensee has projected Rs.59.03lakhs towards interest and finance charges as shown below :

Description	2011-12 Approved (Rs.lakhs)	2012-13 Projected (Rs.lakhs)
Loan for electrical installation of Bhavani and Gayatri buildings	9.66	7.66
Loan for electrical installation of Thejaswini buildings	19.27	16.27
Interest on consumers' deposit	30.67	35.10
Total	59.60	59.03

Interest and Finance charges claimed by the licensee is the interest on capital expenditure for Phase-I for the electrical installations of the buildings noted above and interest on security deposit furnished by the consumers. The Commission approves the Interest and Finance Charges as projected by the licensee.

14. **Depreciation** :- Depreciation approved for 2011-12 and the projection for 2012-13 made by the licensee are given below :

Description of Asset	Approved for 2011-12 (Rs.lakhs)	Projected for 2012-13 (Rs. lakhs)	GFA in the beginning of the year (Rs.lakhs)	Rate of Depreciation %
Civil Works	3.40	22.12	1228.68	1.80
Switchyard equipment	0.00	54.10	1502.86	3.60
Transmission Lines	25.97	26.27	729.75	3.60
Substations	69.79	70.40	1955.75	3.60
11 KV works	3.00	3.62	100.60	3.60
LT lines Service Connections etc.	0.88	0.88	24.41	3.60
Metering equipment	0.09	0.09	2.53	3.56
Others - Electrical Installation	0.03	0.03	0.91	3.30
Total	103.16	177.52		

The Licensee has stated that GFA at the beginning of the year has been taken for the purpose of calculating depreciation. The estimated depreciation for 2012-13 is higher by Rs.74.36 lakhs compared to previous year, which is mainly on account of addition of assets made during 2011-12. However, it can be seen that the works envisaged in different phases are not yet complete and hence it is not proper to capitalise the works before the asset is completely operational. Hence, as a policy, depreciation can be allowed once the assets are ready to earn revenue or benefits from the asset. Considering this, depreciation is estimated without considering the addition of assets made in 2011-12. Thus, the depreciation for 2012-13 will be as follows :

Approved Depreciation for 2012-13

Description of Assets	GFA	Rate of depreciation %	Depreciation Amount (Rs.lakhs)
Civil works	188.95	1.80	3.40
Transmission Lines	721.23	3.60	25.97
Substations	1938.68	3.60	69.79
11 KV works	83.28	3.60	3.00
LT Lines, Service Connections etc.	24.41	3.60	0.88
Metering equipment	2.53	3.56	0.09
Others - Electrical Installations	0.91	3.30	0.03
Total			103.16

Thus the admissible depreciation for 2012-13 is Rs.103.16 lakh only.

15. **Employee Cost** :The Licensee has claimed Rs.15.70 lakhs towards employee cost. The approved employee cost for 2011-12 was Rs.14.27 lakhs. The projected increase over previous year is 10.02%. Cost of employing an electrical consultant is charged to project cost and cost of other 52 contract staff is included in the O&M expenses. The Commission can decide a final view on the apportionment of employee cost for small licensees after the consultancy work already initiated is completed. Till then the present method adopted by the licensee is accepted and the projected employee cost of Rs.15.70 lakhs is approved.
16. **R&M Expenses**: The licensee has projected Rs.129.78 lakhs as R&M Expenses for 2012-13. The approved R&M expenses for 2011-12 was Rs.92.32 lakh. The projected expense is 40.57% over the approved expense of the previous year. The reason for increase stated by the licensee is inclusion of R&M works for the new areas. The phase wise details of R&M expenses given by the licensee are as follows:

Technopark Phase I	Rs.109.0 lakhs
Phase II & III	Rs 20.5 lakhs
Total	Rs.129.5 lakhs

The licensee has further stated that the expense at phase II & III is for the Substation maintenance and for the cost of 52 contract staff engaged for O&M work. Considering the expansion of the distribution system and the necessity for providing uninterrupted quality supply in the licence area the R&M expenses projected by the licensee are approved subject to scrutiny at the truing up stage.

17. **A&G Expenses**: The A&G expense projected by the licensee is Rs.60.19 lakhs which is 25.44% over the approved amount of Rs.47.98 lakhs for the previous year. A & G expenses over the previous years are as given below:

A&G expenses approved over the years

Year	R&M Costs Rs.in lakhs	Remarks
2007-08	47.99	Actual
2008-09	59.92	Approved
2009-10	51.35	Approved
2010-11	55.96	Approved
2011-12	47.98	Approved
2012-13	60.19	Projected

18. The major items of A&G expenses include Security charges (Rs.6.6 lakhs) electricity charges (Rs.29.14 lakhs) Consultancy charges (Rs.3 lakhs) Other Administrative charges (Rs.6.35 lakhs) and Conveyance and hire charges of Vehicle (Rs.5.86 lakhs). The amount projected for the Security expenses and electricity charges is comparatively higher than the previous year. Electricity charges is about 56% higher over the previous year. The licensee has clarified that 40% of the self consumption is apportioned as electricity charges. As has been mentioned in the previous years, A&G expense is a controllable expense and the licensees have to take earnest efforts to control it. Hence, the Commission allows a 10% increase over the approved expenses for previous year. Thus the A&G expenses approved for 2012-13 is Rs.52.77 lakhs. The licensee has to limit the expenses at the approved level.

19. **Statutory Surplus:** The Licensee has projected Rs.1090 lakhs as Return on Investment for the year 2012-13. The estimation on return on investment given by the licensee is as follows:

a) 14 % Return on equity of Rs.707.23 lakhs	:	Rs.99.01 lakhs
b) ROE on debt portion of Rs.7136.77 lakhs	:	
@bank PLR 13%		Rs:927.78 lakhs.
c) ROE on Working capital Rs.641.54 lakhs		
at PLR rate of 10.25% :		Rs.64.73 lakhs
Total		Rs.1091.52 lakhs

It is apparent from the estimation that the licensee has included all the investments proposed in different phases for estimating the return. The same can be considered only after completion. Without going in to the merits of the calculation made by the licensee for claiming Rs.1090 lakhs towards Return on Investment, the Commission has to point out again that the issue of determining the reasonable ratebase for allowing the return is under the examination of the consultants. Till a decision is taken on the issue the Commission allows a provisional return of Rs.10 lakhs for 2012-13.

20. **Gross Aggregate Revenue Requirements for 2012-13:** Based on the above deliberations, the Aggregate Revenue Requirements proposed and approved for 2012-13 are as given below:

Approved ARR for 2012-13

Category	2012-13	
	Projected (Rs.in lakhs)	Approved (Rs.in lakhs)
Power purchase cost	2820.16	2820.12
Interest and Finance charges	59.03	59.03
Depreciation	177.52	103.16
Employee costs	15.70	15.70
R & M Expenses	129.78	129.78
A & G Expenses	60.19	52.77
Return on Investment	1090.00	10.00
Total Expenditure	4352.38	3190.56

21. **Revenue from Tariffs:** - The sales of energy as given by the licensee in Form No. G in the ARR & ERC is as follows:

Estimate of Revenue from sale of power for 2012-13

Category	No. of Consumers	Energy Sales (lakh units)	Amount Rs.in lakh	Average realisation (Rs./kWh)
HT	18	261.83	1154.45	4.41
LT consumers	469	421.88	1898.34	4.50
Self Consumption	7	17.33	72.86	4.09
Public lighting	4	2.16	8.45	
Total	498	703.20	3134.10	

The average realisation from HT consumers is Rs.4.41/unit and that from LT consumers is 4.50/unit. The average realisations from these two categories is higher than that of the previous year. The average realisation from self-consumption and public lighting is calculated as Rs.3.83/unit and Rs.3.91/unit respectively.

22. The licensee has also projected Rs.6.00 lakhs towards penalty for delayed payment and Rs.0.25 lakh towards other receipts. The Licensee has clarified that Rs.6.91 lakh furnished is Surcharge for delayed payment. Though it is shown under 'other state levies', it has not been deducted from the Gross revenue along with electricity duty. So the licensee's clarification is accepted and Rs.6.91 lakhs is also considered as penalty for delayed payment. The total other charges amounts to Rs.13.16 lakhs. Thus the total revenue from charges is estimated as Rs.3147.26 lakhs. The Commission approves the estimates of the licensee.

23. **Non- Tariff Revenue:** The Licensee has projected the Non-Tariff Income of Rs.28 lakhs for 2012-13. The Commission approves the estimates of the licensee.

Estimate of non-tariff income for 2012-13

	2011-12 Approved (Rs. lakh)	2012-13 Projected (Rs. lakh)
Interest on Security Deposit with KSEB	13.25	16.50
Interest on Bank Fixed Deposit	10.50	10.50
Interest fro Banks	0.50	0.50
Mis. Recoveries	1.50	0.50
Total	25.75	28.00

24. **Total Revenue from Charges:** The total revenue for the year is thus Rs.3175.26 lakhs.
25. **Revenue surplus/(gap):** Revenue gap projected by the licensee for 2012-13 is Rs.1177.12 lakhs. Based on the materials provided by the licensee and explanation/clarification given at the time of hearing, the Commission arrives at a Revenue Gap of Rs.15.30 lakhs as shown below:

Approved ARR & ERC for 2012-13

Description	2012-13	
	Projected (Rs.lakh)	Approved (Rs. lakhs)
Power purchase cost	2820.16	2820.12
Interest and Finance Charges	59.03	59.03
Depreciation	177.52	103.16
Employee cost	15.70	15.70
R & M Expenses	129.78	129.78
A & G Expenses	60.19	52.77
Return on Investment	1090.00	10.00
Total Expenditure	4352.38	3190.56
Revenue from Tariffs	3147.26	3147.26
Non- Tariff Income	28.00	28.00
Total Revenue	3175.26	3175.26
Revenue Surplus/(Gap)	(1177.12)	(15.30)

Orders of the Commission

26. After analysis of the ARR&ERC petition and the clarifications thereon submitted by the licensee, the Commission provisionally approves the ARR of Rs.3190.56 lakhs and estimated revenue of Rs.3175.26 lakhs, leaving a revenue gap of Rs.15.30 lakhs for the year 2012-13 as stated above. The Licensee shall take effective steps to limit the expenses at the approved level. The existing Retail Supply Tariff shall continue till further orders.
27. **Directions:** The licensee shall replace all electro mechanical meters with static meters/electronic energy meters as per schedule furnished in the ARR & ERC petition for 2012-13. The licensee shall submit within three months a comprehensive Capital Investment Plan separately for each phase containing detailed works with year wise proposal, year wise capital outlay, source of funding, proposed/actual date of commencement and completion, and the justification of the investments including cost–benefit analysis.
28. The licensee shall take advance action for sourcing power to their expansion projects so that the upcoming IT/ITES units are not put into difficulties due to lack of power supply.
29. Details of category wise security deposit available and the interest credited to the consumer account for the year 2012-13 shall be furnished before 31.08.2012

Petition disposed of. Ordered accordingly.

Sd/-
P. Parameswaran
Member

Sd/-
Mathew George
Member

Sd/
K.J.Mathew
Chairman

Approved for Issue

Secretary