

CHAPTER – 5

ANNUAL REVENUE REQUIREMENT FOR FY20-22

5.0 ARR Application for FY20-22:

KPTCL has filed its Tariff application dated 30th November, 2018 for the next Control Period FY20-22 and has requested the Commission to approve ARR and transmission Tariff for FY20-22. Further, KPTCL has also requested the Commission to carry forward the deficit of Rs. 417.82 Crores for FY18 to the ARR of FY20, while determining the transmission tariff for FY20.

5.1 KPTCL's Submission:

KPTCL has proposed its ARR for FY20-22 as detailed below:

TABLE – 5.1
Annual Revenue Requirement for FY20-22 – KPTCL's Submission

Amount in Rs. Crores

Sl. No.	Particulars	FY20	FY21	FY22
		As filed (30.11.2018)	As filed (30.11.2018)	As filed (30.11.2018)
1	Energy available for transmission in MU	71,025.00	74,340.70	77,880.46
2	Energy sold at IF Points in MU	68,759.47	71,984.1	75,427.21
3	Transmission Losses in MU	2,265.53	2,356.60	2,453.25
4	Transmission Loss in %	3.19%	3.17%	3.15%
5	Installed Capacity in MW	23,664	25,619	29,317
6	Revenue from Transmission of power & Misc. Revenue in Rs. Crores	3,332.02	3,605.84	4,121.87
7	Expenditure in Rs. Crores			
i	Employee Cost	1,308.58	1,484.65	1,634.54
ii	Repairs & Maintenance	367.52	422.92	486.65
iii	Admin & General Expenses	138.89	153.24	169.06
	Total O&M Expenses	1,814.99	2,060.81	2,290.25
8	Depreciation	1,012.34	1,174.53	1,316.41
9	Interest & Finance Charges	667.07	794.55	859.51
10	Interest on working capital	0.00	0.00	0.00

11	Return on Equity at 15.5%	759.60	892.84	1046.73
12	Income Tax	162.11	190.55	223.39
13	Other Debits	6.72	7.39	8.13
14	Extraordinary items	0.00	0.00	0.00
15	Less:			
16	Interest & Finance Charges capitalized	-93.33	-111.16	-120.25
17	Other Expenses capitalized	-44.21	-46.42	-48.74
18	Other Income	-109.47	-115.03	-120.86
19	Net Prior Period Income /Charges	0.00	0.00	0.00
20	SLDC Charges	0.00	0.00	0.00
	ARR	4,175.82	4,848.06	5,454.57
21	Carry forward of Deficit/Surplus as per APR of FY18	417.82	0.00	0.00
	Net ARR	4,593.64	4,848.05	5,454.57

As per the above ARR, the KPTCL has requested the Commission to approve the following transmission charges, for the Control Period FY20-22:

TABLE – 5.2
Transmission Charges FY20-22 – KPTCL's Submission

Particulars	FY20	FY21	FY22
Transmission Capacity in MW	23,664	25,619	29,317
ARR in Rs. Crores	4,175.82	4,848.07	5,454.56
Gap of FY18 in Rs. Crores	417.82	0	0
Total Revenue Requirement in Rs. Crores.	4,593.64	4,848.07	5,454.56
Transmission Tariff (in Rs./MW/Month)	1,61,766	1,57,698	1,55,045

KPTCL has prayed for:

- i. Approving proposed transmission charges for FY20-22;
- ii. Including the gap in revenue for FY18 as per APR in the ARR of FY20 enable KPTCL to recover the same from ESCOMs;
- iii. Approving SLDC charges as proposed;
- iv. Approving short-term Open access charges for FY20-22.

Commissions' Analysis and Decisions:

The Commission, in accordance with the provisions of the KERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2006, as amended, has taken up the item-wise analysis of expenditure and revenue. In this Chapter the analysis and the decisions of the Commission thereon, are discussed in the following paragraphs.

5.2 Capital Investment Programme for FY20-22:**KPTCL's Proposal:**

KPTCL has proposed a capex of Rs. 3,207.97 Crores, Rs.3,269.64 Crores and Rs.3,287.77 Crores for the Control Period FY20, FY21 and FY22 respectively, duly indicating the capex requirement for the completed, ongoing stations and new works. It is submitted by KPTCL that the capital expenditure is planned with the following objectives:

- a) To meet additional load;
- b) To improve voltage profile;
- c) To take up Green Energy Corridor Projects;
- d) To strengthen the Bengaluru city transmission network;
- e) To facilitate 24/7 power supply by ESCOMs.

KPTCL has further stated that, it is ensuring development of efficient, coordinated and economical system of intra state transmission lines for smooth flow of electricity from a generating station to the load centres through systematic planning and implementation of the transmission capacity building programmes in the State.

The KPTCL's proposed capital investment Plan for FY 20, FY 21 and FY 22 is as follows:

TABLE-5.3
Summary of Capital Budget for FY 20-22

Amount Rs in Crores

YEAR	2019-20	2020-21	2021-22
Stations	1,845.69	1,766.96	2,226.85
Lines	441.56	703.04	440.72
Augmentation	407.94	326.44	124.31
Civil Works	100.00	80.00	70.00
Others	62.78	43.20	25.89
GCB	200.00	200.00	250.00
Miscellaneous	150.00	150.00	150.00
Total	3,207.97	3,269.64	3,287.77

TABLE-5.4
Breakup of Capital Expenditure for FY 20-22

Amount Rs in Corers

Particulars	FY 20		FY 21		FY 22	
	Nos	Budget	Nos	Budget	Nos	Budget
Completed works	94	371.19	156	665.32	223	752.56
Ongoing works	156	1,325.65	221	849.17	190	2,012.38
New Works	417	1,061.13	196	1,325.15	6	52.83
GCB & Civil /Misc. works		450.00		430.00		470.00
Total	667	3,207.97	573	3,269.64	419	3,287.77

It is submitted by KPTCL that the proposed capex is to fulfil the objectives and responsibilities it has to discharge under the Electricity Act, 2003 and the National Electricity Policy, through systematic planning and implementation of the transmission capacity building programme in the State.

Commission's Analysis and Decisions:

Following are the Commission's preliminary observations and corresponding response provided by KPTCL:

- 1. Commission's Observation:** The addition of RE capacity in the State is much more than what was planned when the Power Grid conducted the study for Green Energy Corridors. The KPTCL shall provide the details of its planning and implementation of the Green Corridor in the State considering the present

status of RE and future growth in RE capacity, by revising its earlier plan. KPTCL shall also provide complete details of works being carried out and to be carried out, to meet the anticipated RE Additions.

KPTCL Response: KPTCL has undertaken the development and strengthening of its transmission infrastructure specially to facilitate evacuation of power to be generated from RE sources and to take care of the existing renewable generation, in two phases as under:

TABLE-5.5
Installed Capacity of RE Projects

Phase	Wind capacity (in MW)	Solar capacity (in MW)	Mini Hydel capacity (in MW)	Co-Gen Capacity (in MW)	Total capacity (in MW)	Total no. of works
Phase I	4,871	2,262	54	–	7,187	9
Phase II	2,551	783	–	496	3,830	8

The Status of above works are as under:

Particulars	Status of works							
	Phase	Line Survey under Progress	Land to be identified	Land Acquisition under progress	Estimate under preparation	NIT issued	Work under progress	Commissioned
No. of Works	Phase I	1	–	–	–	1	5	2
	Phase II	3	2	1	2	–	–	–

- 2. Commission's Observation:** The '24X7 Power for All' Programme initiated by the Government of India began few years ago. Whether KPTCL network, as existing now, is adequate to provide '24X7 Power for All' throughout the State, without any constraints, during the Control Period FY20-FY22, needs to be examined. If it is not adequate, the KPTCL shall indicate the measures already initiated and the action plan to provide 24X7 Power for all during the said Control Period.

The KPTCL has to assess the network capability for harnessing the solar power by shifting the 11kV Agricultural feeders simultaneously during the solar peak generation period and take necessary action to cater the loads without any constraints. Action taken in this regard may be furnished.

KPTCL Response: KPTCL has initiated action on implementing 24X7 power supply to all consumers. In view of this, adequacy of transmission network has been evaluated and planned accordingly. Proposals for establishing new sub-stations, Augmentation and line strengthening under this program are under review. Zone-wise details of works approved under “24X7 Power for All” programme is as follows:

TABLE-5.6
Proposals for Augmentation of New Sub-Stations & Lines

Sl. No.	Transmission Zone	Total no. of works	Sub-Station	Augmentation
1	Bagalkot	16	6	10
2	Bengaluru	12	1	10
3	Hassan	5	1	4
4	Mysore	10	-	10
5	Tumakuru	12	4	8
6	Gulbarga	2	-	2

- 3. Commission’s Observation:** Whether the KPTCL has done any study to know the percentage of utilisation of Transmission lines meant for evacuation of RE Power? And whether it has considered any cost-effective and efficient methods for evacuation of Power from RE Power depending upon the requirement? If so details thereof may please be provided.

KPTCL Response: KPTCL is carrying out regularly, the detailed load flow study, to check the feasibility for evacuation of RE power for normal and contingency conditions. Studies are conducted for each RE project and evacuation scheme is proposed with most economical and reliable, to evacuate the RE generation meeting all CEA Planning Guidelines. To facilitate the evacuation of RE power, KPTCL has planned to build transmission infrastructure with transmission capacity of about 4920 MVA and transmission lines of about 2800 ckms.

- 4. Commission’s Observation:** Whether KPTCL has done Analysis on impact of delay in projects on increase in cost and increase in per unit of cost of transmission.

KPTCL’s Response: KPTCL is reviewing the projects regularly for ensuring timely completion to reduce any time over-run /cost over-run. Further, post-

commissioning analysis of the completed works is also carried out and prudence check by third party is conducted by the Commission.

Some of the KPTCL responses provided are general in nature and specific and precise information from KPTCL was not forthcoming. The Commission directs KPTCL to take up the analysis and submit its details to the Commission, in the interest of consumers.

The KPTCL has furnished the funding details to meet the Capex for the Control period FY20-22, as under:

TABLE-5.7
Funding of Capex Proposed by KPTCL

Particulars	Rs. in Crores		
	FY20	FY21	FY22
Equity from Govt. of Karnataka	100.00	100.00	100.00
Borrowings from Commercial Banks	2,607.97	2,669.65	2,687.70
Internal Resources	500.00	500.00	500.00
Total	3,207.97	3,269.65	3,287.70

The status of capex proposed, approved, incurred and percentage achievement of capex incurred for the period from FY14 to FY18 is as under:

TABLE-5.8
KPTCL CAPEX Approved v/s Actuals

Particulars	Rs. in Crores				
	FY14	FY15	FY16	FY17	FY18
Capital investment Proposed	1,400.00	1,400.00	1,400.00	2,000.00	2,000.00
Capital investment approved by the Commission	1,400.00	1,400.00	1,400.00	2,000.00	2,000.00
Actual capital investment incurred as per audited accounts	887.58	754.25	1,278.81	1,701.96	1,825.28
Percentage achievement	63.40%	53.88%	91.34%	85.10%	91.26%

It is seen from the above that the actual average capex for the last three years is around Rs. 1,600 Crores annually.

The Commission notes that, the capex required for completed works and the ongoing works amounts to more than 50% of the capex proposed for each year from FY20 to FY22. This shows that, every year KPTCL is carrying forward a huge amount relating to works in progress to the next year, resulting in delay in completion and categorization of works.

In the light of the above, the Commission is of the view that allowing huge capex (which is not likely to be achieved), would have unjustified tariff implications and would amount to burdening the consumers with higher tariff without passing on the corresponding benefits to them. Hence, the capex to be allowed should be at reasonable levels which are achievable, so as to strike a balance between the capex needs and the likely achievement by the transmission licensee.

Hence, the Commission recognizes capex of Rs. 2,000 Crores for each of the years of the Control Period FY20-22, subject to prudence check. However, considering the internal resources and equity to finance the capex, the Commission decides to consider a reasonable amount of Rs. 1,500 Crores for the ARR and tariff computation and directs KPTCL that, if it requires any additional capex, it shall incur the same through re-appropriation of the amounts saved in other heads of expenditure, with proper justification. KPTCL shall not approach the Commission in the middle of the year for any additional capex requirement.

5.3 Transmission Losses:

KPTCL, in its filing, has projected the transmission losses for the fifth Control Period based on the energy input into the KPTCL grid and energy output as measured at interface points with ESCOMs. Further, the energy assessed for supply through open access is also included. The transmission losses projected for the Control Period are as follows:

TABLE-5.9
Transmission Losses FY20-22 – KPTCL's Submission

Particulars	FY20	FY21	FY22
Input Energy to KPTCL Grid (MU)	71,025	74,340.70	77,880.46
Energy at interface point (MU)	68,759.47	71,984.10	75,427.21
Transmission loss in MU	2,265.53	2,356.60	2,453.25
Transmission loss in %	3.19	3.17	3.15

The proposed transmission loss trajectory for the control period is as follows:

TABLE – 5.10
Projected Trajectory of transmission losses (in % terms)

Range	FY20	FY21	FY22
Upper Limit	3.29	3.27	3.25
Average	3.19	3.17	3.15
Lower Limit	3.09	3.07	3.05

KPTCL has stated that, it has taken up system improvement works like adding new/link lines, augmentation of existing transformer capacities and establishment of new sub-stations closer to the load centres. KPTCL has stated that, the proposed works would enable creation of robust transmission network, improve the system reliability, besides reducing transmission losses.

Commission's Analysis & Decision:

The Commission, in its Tariff Order dated 30th March, 2016, pertaining to the previous control period FY17-19, had benchmarked transmission losses at 3.47 for FY17, 3.37 % for FY18 and 3.27% for FY19, on the basis of energy input to KPTCL system and output as per the energy delivered at interface points of ESCOMs. The actual transmission losses are reported at 3.283% for FY17 and 3.222% for FY18.

The Commission in its preliminary observations, had noted that KPTCL, in its application for approval of ARR for FY20-22, has projected the transmission losses of 3.19%, 3.17% and 3.15% respectively for FY20-22. As per the audited accounts of KPTCL for FY18, the actual transmission losses indicated as 3.283% for FY17 and 3.222% for FY18 and there is a reduction of 0.061 percentage points over FY17. The Commission note that considering the achievement made by KPTCL in reduction of transmission losses during previous years and the huge capex proposed for the control period, the projected transmission losses, with a reduction of the 0.02 percentage point uniformly for all the years of the control period, is not justifiable.

The Commission notes the KPTCL's submission that reduction of losses is a continuous process and is dependent on source of generation and load demand of ESCOMs, which is spread across the State. KPTCL submitted that it is making sustained efforts to reduce losses and that it would strive to achieve better reduction in losses.

The Commission further notes the replies furnished by KPTCL on the preliminary observations. The approach of the Commission regarding losses is discussed in the subsequent paragraphs.

As regards the auxiliary consumption, the Commission, as per its earlier decision continues to treat the same as sale by ESCOMs and charges payable by KPTCL. Further, KPTCL has excluded the auxiliary consumption while computing its transmission losses, as directed by the Commission.

Considering the actual loss levels achieved in FY18, the current level of transmission losses reported for FY19 and the capex proposals for the control period FY20-22 wherein KPTCL has stated that investments in transmission network would result in reduction of losses, both in transmission and distribution system, the Commission is of the view that the losses could be reduced by 0.03% every year during the control period and decides to approve the loss trajectory for FY20-22 as follows:

TABLE – 5.11
Approved trajectory of Transmission Losses for FY20-22
In Percentage

Range	FY20	FY21	FY22
Upper Limit	3.212	3.182	3.152
Average	3.162	3.132	3.102
Lower Limit	3.112	3.082	3.052

5.4 O & M Expenses:

KPTCL Submission:

- a) KPTCL, in its filing, has projected O & M expenses which include Repairs and Maintenance Expenses (R& M expenses), Administration and General Expenses (A&G expenses) and Employee Cost, as detailed below:

b) Repairs and Maintenance Expenses (R & M Expenses)

R&M Expenses have been projected at an average rate of about 15% over and above the budgeted amount for FY19, stating that the same is essential for improving existing stations and other office buildings and the stations likely to come up during the 5th Control Period. Further, KPTCL has also reckoned

the expenditure on the maintenance of SCADA infrastructure, station control room equipment, TCD and RT division equipment etc. The R & M expenses projected for the Control Period are as follows:

TABLE – 5.12
R&M expenses – KPTCL's projections

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
Repairs and maintenance (excluding expenses shared by ESCOMs)	367.52	422.92	486.65

c) Employees Costs

KPTCL in its filing, has stated that, the Employees cost estimates are based on normal increase like Annual Increments and Dearness Allowance of 3.00% per instalment, for two annual instalments and other allowances at the existing rates. Further, KPTCL has computed contribution to Pension Trust considering the provisional actuarial valuation at 59.61% on Basic pay, 64.47% on Dearness pay and 69.62% on Dearness Allowance for Pension and for Gratuity at 7.91%, 8.70%, 9.57% on Basic Pay and Dearness Pay. KPTCL has also included the cost of expected recruitment of 698 employees during the control period. The details of the Employees Costs proposed by KPTCL are as follows:

TABLE – 5.13
Employee cost – KPTCL's projection

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
Employees Cost (excluding expenses shared by ESCOMs)	1,308.58	1,484.65	1,634.54

d) Administration and General Expenses:

KPTCL has stated that, the Administration & General (A&G) Expenses are estimated at an average increase of 10% for the fifth Control Period taking into account expenses like Rent, Rates and Taxes, Expenses to be incurred towards Security arrangement, Insurance and Telephone charges, station maintenance, V-sat, internet charges, travelling and conveyance

expenses etc. Accordingly, the projected A&G expenses for the control period are as follows:

TABLE – 5.14
A&G Expenses - KPTCL's Projections

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
A & G Expenses (excluding expenses shared by ESCOMs)	138.89	153.24	169.06

Summary of O&M Expenses projections for the MYT period.

TABLE – 5.15
O&M Expenses – KPTCL's projections

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
R&M Expenses	367.52	422.92	486.65
Employee Cost	1,308.58	1,484.65	1,634.54
A&G Expenses	138.89	153.24	169.06
O & M expenses (excluding expenses shared by ESCOMs)	1,814.99	2,060.81	2,290.25

KPTCL has also worked out the normative O & M expenses as per MYT Regulations considering the following:

a. The projected details of circuit kilometres of transmission lines as follows:

TABLE – 5.16
Voltage class-wise transmission lines – KPTCL's Projections

Voltage Class	FY18 Actuals	FY19	FY20	FY21	FY22
400 kV	3,544	3,953	4,182	4,552	5,940
220 kV	1,1279	11,243	12,317	13,331	14,536
110 kV	10,509	11,596	12,140	12,572	13,108
66 kV	10,792	11,422	11,783	12,792	13,235
Total	36124	38214	40422	43247	46819

a. The projected details of number of bays are as follows:

TABLE – 5.17
Number of Bays – KPTCL's Projections

Year	Line Bay	Transformer Bays	PT Bay	Capacitor Bank Bay	11 KV Bay	Total
	A	B	C	D	E	(A+B+C+D+E)
FY18 (Actuals)	5,427	2,543	1,595	962	11,945	22,472
FY19	5,657	2,723	1,764	1,328	12,758	24,230
FY20	5,919	2,826	1,849	1,397	13,349	25,340
FY21	6,129	2,939	1,929	1,480	13,980	26,457
FY22	6,420	3,070	2,049	1,545	14,483	27,567

Considering the above, the KPTCL has computed the O & M expenses as per MYT Regulations as indicated below:

TABLE – 5.18
Normative O&M Expenses for FY20-22

KPTCL's Projections

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
O & M Expenses for lines	339.54	363.27	393.28
O & M Expenses for bays	813.41	849.27	884.90
Total O & M Expenses	1,152.95	1,212.54	1,278.18

KPTCL has stated that, even if the inflation at the rate of 8% as factored by the Commission in the Tariff Order 2018 is considered, the O&M expenses as per normative rates would increase marginally and this amount is not adequate as compared to the projections made by the KPTCL based on the actual expenses for FY18, escalated by a moderate increase of 12%.

Hence, KPTCL has requested to approve the O & M expenses as proposed by them.

Commission's Analysis and Decision:

As per the provisions of the MYT Regulations, the transmission licensee is required to propose O & M expenses on the basis of per Ckt – Km of transmission lines and per bay of sub-stations for the base year and apply appropriate inflation factors.

KPTCL has requested the Commission to allow normative increase of 12% over the actuals, as the allowable normative O & M expenses computed as per norms are not adequate to meet the actual O& M expenses.

The Commission had noted the actual O&M expenses incurred by the KPTCL in the previous years as per the audited accounts and in its preliminary observations had directed KPTCL to furnish the details of computation for having claimed the abnormal amount for contribution to pension and gratuity trust for the control period FY20 -22, which is submitted by KPTCL.

Hitherto, the Commission was considering the average actual O & M expenses incurred by the KPTCL in the preceding three years for which audited accounts were available, for computation of the base year data for projection of the O & M expenses for the next control period.

The Commission notes the actual O&M expenses of preceding three years as per the audited accounts for FY16 to FY18. Thus, the preceding three years' average O&M expenses may not fully factor the additional employee cost of pay revision effect for the next control period FY20-22. The Commission has noted the new elements of O & M expenses included in the FY18, namely payment of pay revision arrears and the corresponding contribution to P & G on account of pay revision, apart from the normal P&G contribution and leave encashment. Hence, the Commission decides to consider the actual O & M expenses of the FY18, as per the audited accounts of KPTCL, including the pay revision amount, the contribution to Pension and Gratuity Trust and provisions for the leave encashment, as base year data for the control period FY20-22 and escalate the same at the inflation rate of **8.2760%** every year. As such, the break up details of P & G contribution furnished by KPTCL is not considered separately.

Further, the Commission is of the view that any revision of pay scales should reflect in improved productivity and efficiency for the betterment of services rendered by the KPTCL to the consumers in the State. As per the decisions of the Commission, in similar situations, in the earlier Tariff Orders, the KPTCL was required to justify any increase in pay scales commensurate with increase in real employee productivity.

Accordingly, the Commission has computed the allowable O & M expenses for the Control Period FY20-22 by considering the actual O & M expenses for the base year the FY18 (with pay revision, P&G contribution and leave encashment) duly applying the inflation factor computed with apportionment of CPI and WPI in the ratio of 80: 20 as followed during the preceding control period and as the employee cost constitutes nearly about 80% of the O & M expenses. The inflation factor is determined based on the similar methodology adopted by the CERC, from time to time as shown below:

TABLE – 5.19
Computation of weighted inflation index

Year	WPI	CPI	Composite Series	Yt/Y1=Rt	Ln Rt	Year (t-1)	Product [(t-1)* (LnRt)]
2006	70.2	122.9	112.36				
2007	73.6	130.8	119.36	1.06	0.06	1	0.06
2008	80.0	141.7	129.36	1.15	0.14	2	0.28
2009	81.9	157.1	142.06	1.26	0.23	3	0.70
2010	89.7	175.9	158.66	1.41	0.35	4	1.38
2011	98.2	191.5	172.84	1.54	0.43	5	2.15
2012	105.7	209.3	188.58	1.68	0.52	6	3.11
2013	111.1	232.2	207.98	1.85	0.62	7	4.31
2014	114.8	246.9	220.48	1.96	0.67	8	5.39
2015	110.3	261.4	231.20	2.06	0.72	9	6.49
2016	110.3	274.3	241.50	2.15	0.77	10	7.65
2017	114.1	281.2	247.78	2.21	0.79	11	8.70
A= Sum of the product column							40.23
B= 6 Times of A							241.40
C= (n-1)*n*(2n-1) where n= No of years of data=12							3,036.00
D=B/C							0.08
g(Exponential factor)= Exponential (D)-1							0.0828
e=Annual Escalation Rate (%)=g*100							8.2760

The Commission notes that, as per the actual data furnished by the KPTCL for the FY18, substantial amount of the O & M expenses is spent on maintenance of Bays (stations) as compared to transmission lines. Hence, the Commission decides to allocate 70% of the cost to maintenance of bays and 30% to maintenance of lines.

The Commission notes that the number of Bays and voltage class-wise Transmission lines projected by the KPTCL for the control period FY20 to FY22 are on a higher side when compared with the actual number of Bays and transmission lines in ckt-kms. during the previous years. The higher number of bays and lines projected by the KPTCL has resulted in claiming of higher amount of O&M expenses and which in turn lead to front loading of the same in the transmission charges to be payable by the ESCOMs and ultimately to the consumers. The KPTCL should have projected the number of bays and transmission lines to be added during the next control period FY20 to FY22 in a realistic manner.

The Commission has noted the actual number of bays and transmission lines added during the previous years as per the audited accounts. The Commission by considering the same growth rate and also the amount of capex approved for the next control period FY20 to FY22, has reckoned the number of bays and transmission lines (Ckt-kms) in computation of O&M expenses as detailed below:

Table:5.20
Approved Total Number of Bays and Transmission lines
(Ckt-kms) for FY20-22

Year	No. of Bays	No. of Transmission Lines (ckt-kms.)
2020	23,956	38,138
2021	24,698	39,145
2022	25,440	40,152

Considering the above factors, the actual O & M expenses of the FY18 as per the audited accounts and the reckoned number of Bays and Lines as made out in the above table, the normative O & M expenses for the FY20-22 is worked out, as follows:

TABLE – 5.21
Actual O & M Expenses FY18

Particulars	FY18
Actual O&M expenses without SLDC Charges in Rs. Crores	1,233.47
O&M Costs for stations in terms of bays in Rs. Crores @70% of O&M Expenses	863.43
O&M Costs for Transmission Lines in terms of Ckt-Kms in Rs Crores @30% of O&M Expenses	370.04
Bays (Nos)	22,472.00
Line length (Ckt-Kms)	36,124.00
O & M Cost (Rs.in thousands)	
O&M Cost per bay	384.22
O&M Cost per Ckt.kms	102.44

Based on the above, the normative O & M Expenses for the Control Period FY20 to FY22 are worked out as under:

TABLE – 5.22
Normative O & M Expenses for the Control Period FY20 to FY22

Particulars	Amount in Rs. Crores			
	FY19	FY20	FY21	FY22
O&M cost in terms Rs. Thousand/bay	402.73	436.05	472.14	511.22
O&M cost in terms Rs. Thousand/Km of Line	107.91	116.84	126.51	136.98
Inflation rate*	8.270	8.2760	8.2760	8.2760
No. of Bays	23214	23956	24698	25440
Length of Line in Ckt-Kms	37,131	38138	39145	40152
O&M Expenses for Bays Rs. Crores	934.89	1,044.61	1,166.10	1,300.54
O&M Expenses for Lines Rs Crores	400.67	445.59	495.21	549.98
TOTAL O&M Expenses as per Norms Rs. Crores	1,335.55	1,490.20	1,661.30	1,850.52

The allowable O&M charges computed as above for the next control period FY20 to FY22 is inclusive of revision of pay, contributions to P&G Trust and the leave contribution amounts. Thus, Commission is not allowing the same amount as an additional uncontrollable O&M expenses separately for FY20 to FY22.

Regarding the KPTCL's claim for the additional uncontrollable employee cost on account of recruitment of additional 698 employers during the next control period, the Commission decides to consider the same on actual basis while approving the APR for the relevant period.

Based on the above, the approved O & M expenses for FY20-22 are as follows:

TABLE – 5.23
Approved O&M Expenses for FY20-22

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
Allowable O&M Expenses with P&G Contribution leave encashment and pay revision	1,490.20	1,661.30	1,850.52

5.5 Depreciation:

The KPTCL has submitted that the depreciation rates are based on CERC prescribed rates for the relevant period. The depreciation amount worked out by the KPTCL in the following Table, is by considering the average rate of depreciation as 5.19%, duly taking into account the proposed addition of assets year on year. The depreciation claimed by the KPTCL for the FY20-22 is as under:

TABLE – 5.24
Depreciation – KPTCL's Projections

Amount in Rs. Crores		
FY20	FY21	FY22
1,012.34	1,174.53	1,316.41

Commission's Analysis and Decisions:

As per the MYT Regulations, as amended, the allowable depreciation is based on the rate of depreciation as specified by the CERC from time to time. The Commission has considered the opening and closing balances of gross block of assets for the FY18 as per the audited accounts. As discussed in the earlier paragraphs of this chapter, the Commission has decided to allow an amount of Rs. 2,000 Crores for each of the years of the control

period towards capex as against the Capex of Rs. 3207.97 Crores for FY20, Rs. 3,269.64 Crores for FY21 and Rs. 3,287.77 Crores for FY22 proposed by KPTCL. However, considering the actual achievements of the KPTCL, as against approved capex during the previous four control periods and to avoid front loading of the depreciation amount in the transmission tariff, for the purpose of factoring the depreciation on the proposed investments and likely addition of assets, the Commission decides to consider the expected capital expenditure of Rs. 1,500 Crores for each of the years of the control period of the FY20-22. Based on this decision, the Commission has considered category-wise addition of assets as proposed by the KPTCL on pro-rata basis. Since, the depreciation during the year is computed on the basis of capitalization of assets from time to time, during the year, the Commission has determined the allowable depreciation on the average of opening and closing gross block of assets by applying the rate of depreciation as specified by the CERC.

In accordance with the Accounting Standards 12 of the Institute of Chartered Accountants, the Commission has deducted the depreciation on account of assets created out of consumer contribution / grants. The depreciation is computed as per the actual data of net fixed assets and depreciation thereon as per the audited accounts for the FY18. Based on this rate of depreciation, the allowable depreciation is computed on the capital assets excluding assets created out of consumers' contribution / grants as proposed by the KPTCL for FY20-22.

The Commission also notes that, year on year, there is increase in the amount under work in progress account. The Commission directs KPTCL to take suitable action to complete and commission the works in time to make use of the assets and reduce the work in progress balance.

Accordingly, the allowable depreciation for the control period are as follows:

TABLE – 5.25
Approved Depreciation for FY20-22

Particulars of assets	Amount in Rs. Crores		
	FY20	FY21	FY22
Land and Rights	-	-	-
Building and structures	22.60	24.10	25.68
Plant and Machinery Substation Transformers, Circuit breakers, other fixed apparatus of rating 100 MVA and above.	429.90	458.56	488.54
Substation Transformers, Circuit breakers, other fixed apparatus of rating below 100 MVA .	376.10	401.17	427.40
Hydraulic Works	4.68	4.99	5.32
Other Civil Works	3.87	4.13	4.40
Vehicles	0.48	0.51	0.54
Furniture Fixtures	1.14	1.22	1.30
Office Equipment	0.24	0.26	0.28
Depreciation on released assets and released assets issued to repairs.	2.44	2.48	2.52
Gross Depreciation (Before Capitalization)	841.45	897.42	955.97
Less: Depreciation withdrawn on assets created out of consumer contribution and grants	55.08	57.83	60.72
Allowable Net Depreciation	786.38	839.59	895.25

Thus, the Commission decides to allow a net depreciation of Rs786.38 Crores, Rs. 839.59 Crores and Rs. 895.25 Crores for FY20, FY21 and FY22 respectively, subject to prudence check of capex for the relevant years.

5.6 Interest and Finance Charges:

KPTCL Submissions:

The KPTCL in its filing has submitted that, the Interest cost has been estimated on the existing loan portfolios and on proposed loans during the fifth control period. In the case of existing loans as on 31-03-2018, the interest on loans is computed at a rate of 8.5% per annum for FY19. For future investments during the control period, the KPTCL has considered the interest rate of 9%.

The details of Interest and Finance charges projected for the FY20 to FY22 are, as follows:

TABLE – 5.26
Interest & Finance Charges – KPTCL's Projections

Amount in Rs. Crores			
Interest and Finance charges	FY20	FY21	FY22
	667.07	794.55	859.51

Commission's Analysis and Decisions:

The Commission notes that, though substantial capex was allowed in the Tariff Orders, the KPTCL, due to the availability of internal resources, has not been able to borrow the extent of loans approved by the Commission and utilize the entire approved capex in the previous four years. The actual achievement varies from as low as 53.88% in the FY15 to 68.71% in the FY18. During the next control period, the KPTCL has proposed huge amounts of annual capital expenditure requirement of Rs.3,207.97 Crores for FY20, Rs. 3,269.64 Crore for FY21 and Rs. 3,287.77 Crore for FY22 as against the past proposal of Rs. 2,356.98 Crores for FY17, Rs. 2,656.47 Crores for FY18 and Rs. 2,770.57 Crore for FY19. As discussed earlier in this Chapter, the Commission has allowed a reasonable expected capex of Rs.1500 Crores for each of the year of the control period FY20 – 22. Considering the actual performance, for the purpose of factoring the interest on proposed investments in to the ARR, the Commission has decided to allow a debt equity ratio of 70 : 30 on Rs.1500 Crores and reckoned Rs.1,050 Crores as new Capital Loan for each of the Control Period FY20-22.

The Commission has taken note of the long term capital loan portfolio of KPTCL. According to this, KPTCL has availed the loan in the past and recent years at the rate of 8.14% to 8.75% from financial institutions.

The weighted average rate of interest on long term loans as per the audited accounts for the FY18 is 8.20% p.a. This rate of interest is considered for the existing loan balances for which interest has to be factored during FY19. Further, for the years FY20 to FY22, the weighted average rate of interest of the preceding year FY19, to FY21 for the relevant year has been considered on the existing loan balances.

The Commission notes that, the present interest rates by commercial banks and financial institutions are charged mainly on the basis of Marginal Cost of fund based Lending Rates (MCLR). These rates are comparatively lower than the base rates (9.05%) considered earlier. Further, in the current economic conditions favourable for investments, it is observed that there is a downward trend in the MCLR and also interest rates. Hence, in such a situation, the Commission is of the view that, the KPTCL can avail Capital loans at competitive interest rates which would be less than the proposed rates. The Commission notes that, the present SBI MCLR rate for capital loans with a tenure of 3 years is 8.50%. Considering the present MCLR, the Commission decides to allow an interest rate of 11.00% for FY20-22 for new Capital loans. It shall be noted that, the rate of interest now considered by the Commission on the new capital loans is subject to review during APR.

On the basis of the above discussions and considering the closing balance of long term loans for the FY18, and on the projected loan balance for the period from FY19 to FY22, the Commission has computed the allowable interest on loans as follows:

TABLE – 5.27
Approved Interest on Loans for FY20-22

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
Opening balance of loans (Secured and unsecured)	5,598.47	5,949.63	6,220.02
Add : New Loans (Borrowings)	1,050.00	1,050.00	1,050.00
Less : Repayments	-698.84	-779.61	-860.38
Total loan at the end of the year	5,949.63	6,220.02	6,409.64
Average Loan	5,774.05	6,084.82	6,314.83
Weighted average rate Interest on Existing Loan Balance	8.47%	8.70%	8.90%
Allowable Interest Rate on new loan in %	11.00%	11.00%	11.00%
Allowable Interest on Capital Loan	502.40	541.51	573.01

Thus, the Commission decides to allow the interest on capital loans of Rs. 502.40 Crores, Rs. 541.51 Crores and Rs. 573.01 Crores for FY20, FY21 and FY22 respectively. The above approved interest and finance charges allowed are subject to prudence check of capex actually made for the relevant years of the control period.

5.7 Interest on Working Capital:

The KPTCL in its filings has submitted that it is managing its finances through short-term borrowings to gain the interest rate advantage. However, KPTCL has not claimed the interest on working capital while proposing the ARR for the control period FY20 to FY22. Further, KPTCL has requested the Commission to allow the interest on working capital for the control period as per the norms under the MYT Regulations.

Commission's Analysis and Decisions:

The Commission notes that, the requirement of working capital has to be met by borrowing on short term basis and utilized for the purpose of financial management of the day to day business of the utility. The KPTCL's filing has not indicated any amount of opening balance of working capital for FY20 and has not proposed borrowing during the entire control period and not has claimed the interest on working capital for the FY20 to FY22. However, the Commission, in accordance with the provisions of the MYT Regulations decides to allow interest on working capital, at the normative rate of interest on the working capital loan.

The Commission therefore, in accordance with the norms specified under MYT Regulations, by considering the present SBI MCLR for short term loans, decides to approve the interest on working capital at normative rate of interest for short term loans at 11% as follows:

TABLE – 5.28

Approved Interest on Working Capital for FY20-22

Particulars	Amount in Rs. Crores		
	FY 20	FY 21	FY 22
One-twelfth of the amount of O&M Exp.	124.18	138.44	154.21
Opening GFA as per Audited Accts	18,383.60	19,616.85	20,916.78
Stores, materials and supplies 1% of Opening balance of GFA	183.84	196.17	209.17
One-sixth of the expected revenue from Transmission user at the prevailing tariffs	524.54	552.33	582.43
Total Working Capital	832.56	886.94	945.81
Rate of Interest (% p.a.)	11.00%	11.00%	11.00%
Interest on Working Capital	91.58	97.56	104.04

Thus, the Commission decides to allow interest on working capital at Rs. 91.58 Crores, Rs. 97.56 Crores and Rs. 104.04 Crores for FY20, FY21 and FY22 respectively.

5.8 Return on Equity:

The KPTCL in its filing had claimed the Return on Equity by considering the equity plus accumulated surplus under reserves and surpluses at the beginning of the year duly applying the rate of return at 15.5% as per the MYT Regulations. The RoE claimed by KPTCL are as follows:

TABLE – 5.29
Return on Equity – KPTCL's Submission

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
Equity	2,282.32	2,382.32	2,482.32
Reserves & Surplus	2,518.35	3,277.95	4,170.79
Share Deposit	100.00	100.00	100.00
Total	4,900.67	5,760.27	6,753.11
RoE @ 15.50%	759.60	892.84	1,046.73

Commission's Analysis and Decisions:

The Commission has considered the closing balance of paid up share capital, the accumulated surplus in profit and loss accounts carry forward to reserve and surplus account and share deposit as per the audited accounts for the FY18 as the opening balance of equity for FY19 and the same is the base data for the projections for the control period FY20-22. The Commission in order to avoid the front loading of the allowable RoE in the transmission tariff, has not carried forward and considered the allowable RoE of each year from FY19 onwards as the additional equity infused during the year for computation of RoE for subsequent year thereon. The Commission decides to allow the RoE by considering the actual profit / loss earned by the KPTCL as per audited accounts while approving the APR of the relevant year. The Commission in accordance with the provisions of MYT Regulations, as amended has computed the allowable RoE at 15.5% grossed up with the prevailing rate of Minimum Alternate Tax (MAT) at 21.5488% on the Return on Equity of 15.50% as detailed below:

TABLE – 5.30
Approved Return on Equity for FY20-22

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
OB: Paid Up Share Capital	2,182.32	2,182.32	2,182.32
OB: Share Deposit	0.00	0.00	0.00
OB: Reserves & Surplus (accumulated surplus)	2,086.25	2,086.25	2,086.25
Total Equity	4,268.57	4,268.57	4,268.57
Allowable RoE at 15.5% with MAT	843.36	843.36	843.36

Thus, the Commission decides to allow Rs. 843.36 Crores as ROE with MAT for each of the years for the control period FY20-22.

5.9 Interest and other Expenses capitalized:

The KPTCL in its filing, has claimed the following interest and other expenses to be capitalized during the control period:

TABLE – 5.31
Proposed capitalization Interest and other Expenses

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
Interest expenses capitalized	93.33	111.16	120.25
Other expenses capitalized	44.21	46.42	48.74
Total	137.54	157.58	168.99

The Commission takes note of the actual amount of interest on capital loans and other expenses capitalised during the previous years as per the audited accounts. Considering the same and the amount of capex and the new borrowings allowed, the Commission decides to allow Rs. 71.82 Crores Rs. 77.41 Crores and Rs. 81.91 Crores as capitalisation of interest for FY20, FY21 and FY22 respectively. Regarding other expenses capitalised, the Commission by considering the actuals as per audited accounts during the previous years, has decided to allow the amounts as claimed by KPTCL, towards other expenses capitalised for FY20-22. **Thus, the Commission decides to allow total capitalised interest and other expenses of Rs.116.03 Crores, Rs.123.83 Crores and Rs.130.65 Crores respectively for FY20-22.**

5.10 Non-Tariff Income:

KPTCL in its filing has projected the non-tariff income of Rs.109.47 Crores, Rs.115.03 Crores and Rs.120.86 Crores by including the depreciation on assets created out of consumers' contribution / grants for FY20, FY21 and FY22 respectively. These amounts mainly include income on account of interest on investments, receipt of rent from staff quarters, receipt of rent from other office buildings, income from sale of scrap, income from trading, and miscellaneous receipts.

Commission's Analysis and Decisions:

The Commission notes that, KPTCL in its filing under Format T4 has projected non-tariff income for the control period considering income from investments, income from sale of scrap, rent from staff quarters /others, income from trading and miscellaneous recoveries. The Commission notes the actual other income earned by KPTCL as per audited accounts during the previous years.

Thus, the Commission by reckoning the actual other income earned by the KPTCL during the previous years, decides to allow the other income for the control period for FY20, FY21 and FY22 as under:

TABLE – 5.32
Approved Non-Tariff Income for FY20-22

Non-Tariff Income	Amount in Rs. Crores		
	FY20	FY21	FY22
	204.12	214.33	225.04

5.11 Provision for Taxes:

The Commission had noted that the KPTCL in its application, for the approval of ARR, while projecting a net revenue gap of Rs.1,261.62 Crores, Rs.1,242.21 Crores and Rs.1,332.70 Crores, has included the provision for income tax of Rs.162.11 Crores, Rs.190.55 Crores and Rs.223.39 Crores for FY20, FY21 and FY22 respectively. The Commission had directed the KPTCL to furnish the reason for claiming the income tax even while projecting a huge amount of revenue deficit for FY20-22. The Commission has noted that the replies furnished by KPTCL in this regard.

The RoE allowed by the Commission in pre-paras for the Control period FY20 -22, also includes the applicable MAT on the allowable RoE at 21.5488%. Thus, the question of allowing income tax again separately does not arise.

5.12 SLDC Charges:

The KPTCL in its filing has excluded the SLDC charges in terms of employee cost, R&M expenses, A&G expenses and depreciation as detailed below:

TABLE – 5.33
SLDC Charges – KPTCL’s Submission

Particulars	Amount in Rs. Crores		
	FY20	FY21	FY22
Employee cost	13.79	15.86	18.40
R&M expenses	0.04	0.04	0.04
A&G expenses	8.79	9.67	10.64
Depreciation	0.22	0.22	0.22
TOTAL	22.84	25.79	29.30

Commission’s Analysis and Decisions:

The system operations of the SLDC being an activity not related to transmission business, the Commission decides that the SLDC charges cannot be factored in the ARR of the KPTCL. As the KPTCL is incurring these costs but has excluded the same in its ARR filing, the same needs to be collected from the users of the transmission network.

The Commission takes note of the actual O&M expenses and depreciation charges of SLDC as per the audited accounts of KPTCL for the previous years. The Commission also notes that, the employee cost of SLDC projected for FY20-22 also includes the component of revision of pay, contribution to P&G trust and leave encashment. As discussed in the earlier paragraphs under O & M expenses, the Commission decides to allow normative employee cost of Rs 13.79 Crores for FY20, Rs. 15.86 Crores for FY21 and Rs 18.40 Crores FY22, besides considering the other expenses namely R&M, A&G and depreciation as proposed by KPTCL. Thus, the net SLDC charges are allowed to be recovered by the KPTCL for the control period FY20-22.

The Commission, as per APR for FY18, has approved under chapter-4 of this order, the actual amount of O&M expenses and depreciation charges of SLDC of Rs. 20.34 Crores to be recovered from the ESCOMs for FY18 as against the SLDC charges of Rs. 24.77 Crores approved by the Commissions in its Tariff Order 2017 dated, 11.04.2017. The net excess amount of Rs. 4.43 Crores collected by the KPTCL from ESCOMs is approved to be adjusted against the approved SLDC charges to be collected from the ESCOMs for FY20.

Thus the net SLDC charges recoverable during FY20 is Rs. 18.41 Crores and the amount to be recovered is Rs. 25.79 Crores for FY21 and Rs. 29.30 Crores for FY 22.

Accordingly, the Commission decides that these charges are to be recovered by the KPTCL from the ESCOMs and other long term transmission network users in proportion to the transmission capacity as follows:

TABLE – 5.34

Approved ESCOM wise SLDC Charges for FY20-22

					Amount in Rs Crores			
Revised SLDC Charges for FY20					SLDC Charges for FY21		SLDC Charges for FY22	
Particulars	Tr. Capacity in MW for FY20	Difference of FY18 to be Adjusted	SLDC Charges for FY20	Net SLDC Charges to be collected in FY20 Revenue and Misc. Revenue	Tr. Capacity in MW for FY21	SLDC Charges to be collected in FY21	Tr. Capacity in MW for FY22	SLDC Charges to be collected in FY22
BESCOM	10,861	- 1.54	11.35	9.81	11,523	12.89	12,113	14.57
MESCOM	1,615	- 0.28	1.69	1.41	1,715	1.92	1,815	2.18
CESC	2,422	- 0.82	2.53	1.71	2,600	2.91	2,800	3.37
HESCOM	4,340	- 1.27	4.53	3.26	4,425	4.95	4,675	5.62
GESCOM	2,625	- 0.52	2.74	2.22	2,800	3.13	2,960	3.56
TOTAL	21,863	- 4.43	22.84	18.41	23,063	25.79	24,363	29.30

* After deducting the excess amount allowed for FY18

5.13 Revenue including Miscellaneous Charges:

KPTCL in its filing has projected a revenue Rs.3,332.02 Crores for FY20, Rs.3,605.84 Crores, for FY21 and Rs.4121.87 Crores for FY22 on the estimated installed capacity of 23,664 MW, 25,619MW and 29,317 MW respectively for FY20, FY21 and FY22 on the basis of the transmission charges of Rs.1,15,776 per Mega Wat per month approved by the Commission in its Tariff Order 2018 dated 14.05.2018.

The Commission, as indicated in the pre-paras, has reckoned the transmission capacity of 21,863 MW, 23,063 MW and 24,363 MW for FY20, FY21 and FY22 respectively and accordingly computed the existing revenue on the basis of per MW per month transmission charges as approved by the Commission for FY19. The Commission notes the revenue earned by the KPTCL during FY17 and FY18 as per the audited accounts. Accordingly, the Commission notes that along with the transmission charges collected from the ESCOMs, KPTCL has also earned the other Miscellaneous revenue on account of usage of transmission network by the other MTOA (Medium Term Open Access) and Short Term Open Access customers of Rs.112.21 Crores for FY17 and Rs.105.83 Crores for FY18. Accordingly, in estimating the revenue from transmission, the Commission on the basis of actual miscellaneous revenue and other operating income earned by KPTCL during the previous years, has decided to factor the same in estimating the total revenue at existing tariff and reckoned Rs. 3,147.26 Crores, Rs. 3,313.98 Crores and Rs. 3,494.59 Crores for FY20, FY21 and FY22 respectively.

5.14 Abstract of Approved ARR for FY20-22

The abstract of approved ARR for the control period FY20-22 are as follows:

TABLE – 5.35**Approved Annual Revenue Requirement for FY20-22**

Amount in Rs. Crores

Particulars	FY20		FY21		FY22	
	As Filed	As Approved	As Filed	As Approved	As Filed	As Approved
Total O&M Expenses	1,814.99	1,490.20	2,060.81	1,661.30	2,290.25	1,850.52
Depreciation	1,012.34	786.38	1,174.53	839.59	1,316.41	895.25
Interest & Finance Charges	667.07	502.40	794.55	541.51	859.51	573.01
Interest on working capital	0.00	91.58	0.00	97.56	0.00	104.04
Return on Equity with MAT at 21.5488% (19.7575% on allowable equity)	759.60	843.36	892.84	843.36	1,046.73	843.36
Income Tax	162.11	0.00	190.55	0.00	223.39	0.00
Other Debits	6.72	0.00	7.39	0.00	8.13	0.00
Extraordinary items	0.00	0.00	0.00	0.00	0.00	0.00
Less						
Interest & Finance Charges capitalised	-93.33	-71.82	-111.16	-77.41	-120.25	-81.91
Other Expenses capitalised	-44.21	-44.21	-46.42	-46.42	-48.74	-48.74
Other Income	-109.47	-204.12	-115.03	-214.33	-120.86	-225.04
Net Prior Period Income /Charges	0.00	0.00	0.00	0.00	0.00	0.00
SLDC Charges	0.00	0.00	0.00	0.00	0.00	0.00
ARR	4,175.82	3,393.77	4,848.06	3,645.17	5,454.57	3,910.48
Carry forward of Deficit/Surplus as per APR of FY18	417.82	112.47	0.00	0.00	0.00	0.00
Net ARR	4,593.64	3,506.24	4,848.06	3,645.17	5,454.57	3,910.48

Based on the approved ARR, the transmission charges for FY20-22 are determined in the subsequent Chapter of this order.