

*Summary of ARR &
Transmission Tariff Filings*

Submitted by

OPTCL

For

FY 2018-19

Summary of OPTCL's ARR & Transmission Tariff filing For FY 2018-19

- 1) In exercise of powers conferred under Sections 39,131,133 and 134 of the Electricity Act, 2003 read with Sections 23 & 24 of the Orissa Electricity Reform Act, 1995, the State Government published the Orissa Electricity Reform (Transfer of Transmission and Related Activities) Scheme, 2005 ("Transfer Scheme") in the Gazette dated 09.06.2005 which was effective retrospectively from 01.04.2005 wherein the Transmission Undertaking (the Undertaking related to the activities of Transmission, State Transmission Utility and State Load Dispatch Centre and acts incidental and ancillary thereto) of the Grid Corporation of Odisha Limited (Transferor), (now renamed GRIDCO Ltd.- "GRIDCO") has been transferred and vested in Odisha Power Transmission Corporation Limited ("OPTCL").
- 2) As per Clause 10 of the Transfer Scheme, OPTCL is a deemed Transmission Licensee under Section 14 of the Electricity Act 2003 for undertaking the business to transmit electricity in the State of Odisha. OPTCL has also been notified as the State Transmission Utility and accordingly, shall discharge the State Load dispatch functions from the date of transfer till further orders of the State Government.
- 3) As provided under Regulation 53 (1) at Chapter VIII of OERC (Conduct of Business) Regulations, 2004 and under Clause 19.3 of License, Conditions of OPTCL, OPTCL is required to submit its Aggregate Revenue Requirement (ARR) application for the ensuing year before OERC for approval. Further, Regulation 5.2 of the OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 requires OPTCL to file ARR application by 30th November of every year of the Control Period. In compliance of the above, OPTCL herewith submits its Aggregate Revenue Requirement & Transmission Tariff application for FY 2018-19 for kind approval of the Commission.
- 4) As on 01.04.2017, OPTCL owns 132 nos. grid sub-stations of different voltage classes and EHT transmission lines of 13,071.463ckt. km. as shown in the Table below:

Table-1

Sub-Station and Line Details	
400/220kV S/S	1
400/220/132/33kV S/S	2
220/132/33kV S/S	19
220/33kV S/S	7
220/132kV S/S	1
132kV Sw.Stn.	20
132/33kV S/S	79
132/33/25kV S/S	1
132/33/11kV S/S	2

Total No. of Sub-Stations	132	
Voltage Level	Lines (ckt. km.)	Bays
400kV	1129.434	35
220kV	5911.208	298
132kV	6030.821	823
33kV		976
25kV		2
11kV		18
TOTAL	13,071.463	2152

Categorization of Open Access Customers

5) All the customers seeking open access to OPTCL Transmission System are classified under two categories:

(a) Long Term Open Access Customers (LTOA Customers)

A Long Term Open Access Customer means a person availing or intending to avail access to the Intra-State Transmission System for a period of 25 years or more. Based on such premise, four DISCOMs, NALCO & IMFA happen to be the long term customers of OPTCL.

East Coast Railway (ECoR) has applied to OPTCL for grant of connectivity and LTOA/MTOA of OPTCL's intra-state network for drawal of power to 29 TSSs of Railway located in Odisha, OPTCL has filed one petition before the Commission on 26.10.2016 in the above matter. OPTCL has prayed therein inter alia to acknowledge ECoR as a "Deemed Distribution Licensee" and declare them as the fifth DISCOM. In the above premises, OPTCL in the present ARR application for FY 2018-19 has projected the demand of ECoR separately (as furnished by each DISCOM) as one LTOA Customer

(b) Short Term Open Access Customers (STOA Customers)

Open access customers other than Long Term Customer(s) are classified as Short Term Customer(s). The maximum duration that a Short Term Customer can avail open access to the Intra-State Transmission is one year with condition to reapply after expiry of the term.

Formulation and Computation of Transmission Charges

6) The Commission has framed OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 (hereinafter called "OERC Regulations,

2014) for determination of Intra-State Transmission Tariff which has been published in Extra Ordinary issue of the Odisha Gazette on 04.12.2014. The said Regulations are effective from 04.12.2014 and are to be followed by the Transmission Licensee while formulating its ARR and Transmission Tariff application.

OPTCL has formulated its present ARR & Transmission Tariff application for FY 2018-19 as per the provisions under OERC Regulations, 2014. Regulation 5 of the OERC Regulations, 2014 specifies the Procedure for Tariff Determination and Regulation 8 specifies the Principles for Determination of ARR. As per the Regulation 8.1, the ARR for the Transmission Business for each year shall contain the following items:

- (a) Operation and Maintenance expenses;
- (b) Interest and Financial Charges;
- (c) Depreciation;
- (d) Return on Equity;
- (e) Income Tax;
- (f) Deposits from Transmission System Users;
- (g) Less: Non-Tariff Income
- (h) Less: Income from Other Business as specified in these Regulations

The various costs involved for carrying out transmission business by OPTCL for FY 2018-19 while formulating the ARR and Transmission Tariff have been categorized under the following heads:

I. Fixed Cost

- 1) Operation & Maintenance (O & M) Expenses
- 2) Interest and Financial Charges
- 3) Depreciation
- 4) Return on Equity

II. OTHERS:

- 1) Incentive for System Availability

Details of Fixed charges - O&M Expenses

Salaries, wages, pension contribution and other employee costs

- 7) The Employee Expenses for FY 2018-19 estimated as **Rs. 419.57 Cr** including Terminal Benefit Liability and possible impact of 7th Pay Commission Report. The above calculations were made on the basis of (i) employee cost, (ii) terminal benefit

liability of employees and existing pensioners and (iii) payment of differential pension and pensioner benefit liability. The details of employ cost including terminal benefit is given in table below.

Table-2

Employee cost including Salary, Dearness Allowance etc.	224.64
Terminal Benefit Liability of Employees and Existing Pensioners	156.00
7 th Pay Commission Impact (Existing & Pensioners)	48.77
Less: Capitalization	9.84
Total	419.57

- 8) OPTCL has proposed that a significant number of posts are lying vacant in different ranks as a result of which functioning of the organization has been seriously affected. OPTCL plans to fill up the vacancies in a phased manner and accordingly the recruitment process has been initiated.
- 9) The employee cost details include salaries, dearness allowance, other allowances, stipend, reimbursement of medical expenses, house rent, leave travel concession, honorarium, Ex-gratia and misc. expenses, staff welfare expenses, wage revision arrear, Stipend for new recruitment etc.

Administrative and General (A&G) Expenses

- 10) The A&G Expenses include property related expenses, communication, professional charges, conveyance and travelling, SLDC charges, licensee fee and material related expenses. OPTCL has proposed **Rs. 27.23 Cr** towards A&G Expenses for FY 2018-19.

Repair and Maintenance (R & M) Expenses

- 11) The R&M works of OPTCL are undertaken in different streams namely O&M, Telecom, Civil Works and Information Technology (IT). The proposed R&M Expenses for FY 2018-19 is **Rs.156.19 Cr** , as shown in the Table below:

Table-3

Repairs and Maintenance Expenses for FY 2018-19 (Rs.Cr)

Particulars	OERC Approval (FY 2016-17)	OERC Approval (FY 2017-18)	Projection (FY 2018-19)
(i) O&M	110.59	124.97	137.51
(ii) Telecom			1.86
(iii) Civil Works			13.50
(iv) Information Technology and Other			3.32
Total R&M Expenses			Rs. 156.19 Cr.

Expenses related to auxiliary energy consumption in the sub-stations

12) The auxiliary energy consumption in the sub-stations for the FY 2014-15, FY 2015-16, FY 2016-17 and FY 2017-18 (up to Sept-17) is 10.75MU, 12.19 MU, 12.55 MU and 9.17 MU respectively. It is estimated that the auxiliary energy consumption for the FY 2018-19 will be about 20 MU. OPTCL proposes **Rs. 5.59 Cr** towards auxiliary energy consumption in the sub-stations.

Other miscellaneous expenses, statutory levies and taxes (except corporate income tax)

13) **Grid Coordination Committee (GCC) Expenses:** Under (GCC) expenses, OPTCL proposes **Rs. 0.88 Cr** towards annual GCC Expenses for FY 2018-19 in line with the said provisions.

14) Taking into account the proposed expenditure towards manpower (Employee Cost including Terminal Benefit), Repair & Spares (R&M Expenses) towards consumables, insurance and overheads (A&G Expenses), GCC expenses, OPTCL proposes the O&M Expenses as **Rs.609.42 Cr** The summary of O&M Expenses for FY 2018-19 is shown in the Table below:

Table-4
Summary of O&M Expenses for FY 2018-19

Particulars	Amount (Rs. Cr.)
(i) Employees Cost including Terminal Benefits	419.57
(ii) A&G Cost	27.23
(iii) R&M Cost	156.19
(iv) Expenses related to auxiliary energy consumption in sub-stations	5.54
(v) Other miscellaneous expenses, statutory levies and taxes (GCC- 0.88)	0.88
Total O&M Expenses	Rs. 609.42 Cr

Interest and Financial Charges

15) Interest on Loan

Interest on loan for FY 2018-19 has been projected as **Rs.94.46 Cr**. Details of interest on loan capital are shown in the Table below:

Table-5

Interest on Loan for FY 2018-19 (Rs. Cr)

Projection for Interest on loan for FY 2018-19 (Rs. Cr.)							
		Rate of Interest	Principal as on 01.04.18	Loan to be received (FY 18-19)	Loan to be redeemed (FY 18-19)	Interest payment (FY 18-19)	Total Payment (FY 18-19)
A	Govt. Loans						
	State Govt. (Cash Loan)	13.00%	2.00			0.26	0.26
	State Govt.(CRF)	0.00%	15.00				0
	GoO Bonds	13.00%	400.00			26.00	26.00
	Sub-Total		417.00			26.26	26.26
B	Institutional Loans						
	Bank of India	09.33%(Avg)	192.71	49.76	6.75	18.32	25.07
	REC Loan	12.02%(Avg)	232.02		25.45	27.33	52.78
	PFC Loan	12.03%(Avg)	51.25		6.00	5.43	11.43
	Union Bank of India	08.10%(Avg)	201.44			16.32	16.32
	JICA	0.80%	25.00	148.88		0.80	0.80
	Sub-Total		702.42	198.64	38.20	68.20	106.40
C	Grand Total		1119.42	198.64	38.20	94.46	132.66

16) Interest on Working Capital:

The Working Capital is estimated as **Rs.230.08 Cr.** The interest on working capital for one month receivable works out to **Rs.27.84 Cr.** considering interest rate of 12.10%. OPTCL proposes **Rs.13.92 Cr** towards interest on working capital for 15 days on receivable.

17) **Rebate:** OPTCL has projected 2% rebate amounting to **Rs.19.81 Cr.** which is calculated based on the projected ARR for the FY 2018-19.

New Projects

18) OPTCL proposes to spend **Rs.1142.55 Cr.** during FY 2018-19 towards Capital Expenditure (CAPEX) on new projects in different streams of activities like O&M, Telecom, IT, Construction and Civil Works. The summary of proposed CAPEX under various wings is furnished in the Table below:

Table-6

Projected CAPEX for new projects - FY 2018-19

Particulars	Amount (Rs. Cr.)
(i) Telecom Wing	65.29
(ii) Existing Assets (O&M Wing)	39.55
(iii) Information Technology (IT Wing)	29.56
(iv) Civil Wing	52.83
(v) New Transmission Projects (Construction Wing)	955.32
Total Capital Expenditure [(i)+(ii)+(iii)+(iv)+(v)]	Rs.1142.55 Cr.

Depreciation

19) The deemed cost of the assets at the beginning of the FY 2018-19 is estimated as **Rs.3683.25 Cr.** (Rs.3069.90 Cr. as on 01.04.17 + Rs.613.35 Cr.: projected addition during FY 2017-18). For 2018-19, Depreciation is estimated as **Rs.217.91 Cr.** which includes Rs.0.66 Cr. towards cost of premium/rent on leasehold land. OPTCL prays the Commission to allow **Rs. 217.91 Cr** towards depreciation in the ARR for FY 2018-19 in order to enable OPTCL to repay the loan availed for CAPEX in time.

Return on Equity

20) At the time of de-merger of GRIDCO effective from 1.4.2005, the equity share capital of OPTCL was stated at Rs. 60.07 Cr. Through infusion of additional capital by the state government, the paid up equity capital of OPTCL has increased to **Rs. 460.07 Cr** as on 31.03.2017 as per the Provisional Account. Government of Odisha has committed to provide funds of Rs. 250 Cr. as equity over the five year period FY 2017-18 to FY 2021-22 i.e. Rs. 50 Cr. annually. Till date OPTCL has received Rs. 400.00Cr. Accordingly, OPTCL proposes Return on Equity (RoE) of **Rs. 69.75 Cr.** during FY 2018-19 @ 15.5% on Rs. 450.00 Cr. (Rs. 510.07 Cr - Rs. 60.07 Cr) i.e. on opening balance of FY 2018-19.

INCOME TAX

21) As per the Regulation 8.43 of OERC Regulations, 2014, Income tax of the Transmission Licensee shall be recovered from the beneficiaries. The Commission in the ARR of 2017-18, vide para 245, has allowed the actual tax expenses Rs.8.15 Cr. booked in the audited accounts for FY 2015-16 which is also claimed by OPTCL in the ARR application of FY 2017-18. It is submitted that OPTCL has projected **Rs.**

6.07 Cr. for the FY 2018-19 towards Income Tax under section 115JB of Income Tax Act, 1961.

TRANSMISSION COST

22) Considering the proposed cost / expenses under different heads, the Transmission Cost of OPTCL for FY 2018-19 is worked out as **Rs.1031.35 Cr.** Details are shown in the Table below:

Table-7
Transmission Cost for FY 2018-19

Particulars	Amount (Rs. Cr.)
Employee Cost including Terminal Benefits	419.57
R&M Cost	156.19
A&G Cost	27.23
Expenses related to auxiliary energy consumption	5.54
Other miscellaneous expenses, statutory levies and taxes (GCC)	0.88
Sub-Total (O&M Cost)	609.42
Interest on Loan Capital	94.46
Interest on Working Capital	13.92
Rebate	19.81
Sub- Total (Interest & Financial Cost)	128.19
Depreciation	217.91
Return on Equity	69.75
Income Tax	6.07
Total	Rs.1031.35 Cr.

Other Costs:

Incentive for system availability:

23) The Regulation 6.4 of OERC Regulations, 2014 specifies the “Operational Norm” applicable for transmission system for recovery of full annual transmission charge by the Transmission Licensee. The Normative Annual Transmission System Availability Factor (NATAF) shall be **98.50%** for AC system for recovery of full Annual Transmission Charges.

OPTCL has filed the calculation of Transmission System Availability Factor (TAFY) for the year 2016-17 as **99.97%**. The computation and the TAFY figure have been verified and certified by SLDC.

In accordance with the formula prescribed in Regulation 6.5, OPTCL has worked out incentive of **Rs. 9.30 Cr.** towards system availability for the year 2016-17 using approved ARR figure of Rs.623.25 Cr. for the said year. Hence, OPTCL proposes **Rs. 9.30 Cr** towards Incentive for System Availability to be allowed in the ARR for FY 2018-19.

Other income and cost / Miscellaneous receipt:

- 24) During 1st six months of FY 2017-18, miscellaneous receipt of OPTCL from different sources is about **Rs. 20.64 Cr.** In line with the trend of revenue earning during FY 2017-18, OPTCL expects the miscellaneous receipt of **Rs. 50.00 Cr** during FY 2018-19.
- 25) The summary of Aggregate Revenue Requirement of OPTCL for FY 2018-19 is shown in the Table below:

Table-8

Summary of Aggregate Revenue Requirement of OPTCL for FY 2018-19

ITEMS	Proposal for OPTCL FY 2018-19	
A) FIXED COST		
1. O&M Expenses		609.42
(i) Employees Cost including Terminal Benefits	419.57	
(ii) A&G Cost	27.23	
(iii) R&M Cost	156.19	
(iv) Expenses related to auxiliary energy consumption	5.59	
(v) Other misc. expenses, statutory levies and taxes (GCC)	0.88	
2. Interest & Financial Charges		128.19
(i) Interest on Loan Capital	94.46	
(ii) Interest on Working Capital	13.92	
(iii) Rebate	19.81	
3. Depreciation		217.91
4. Return on Equity		69.75
5. Income Tax		6.07

Sub-Total (A)		1031.35
B) Others		
Incentive for system availability		9.30
Total Trans. Cost (A+B)		1040.65
C) Less Misc. Receipts		50.00
D) ARR to be recovered from LTOA Customers i.e. OPTCL's Aggregate Revenue Requirement		990.65

Transmission loss:

26) The actual transmission loss in the OPTCL's transmission system from April'17 to September'17 is **3.38%** against Commission's approval of 3.50% for FY 2017-18. OPTCL expects the loss level to remain around 3.40% in the current year. Accordingly, OPTCL proposes **3.25%** transmission loss during FY 2018-19.

Estimation of energy transmitted through OPTCL system

27) In the present application, OPTCL has taken the realistic demand projection of all four DISCOMs plus Railways totalling 26561 MU for FY 2018-19. OPTCL envisages 200 MU of energy to be transacted in DISCOMs 33kV & 11 kV network for which OPTCL is not entitled to receive any transmission charge as per Commission's order. So, OPTCL billed for 26361 MU through their network for meeting DISCOM's requirement. Further, OPTCL will handle 610 MU towards emergency sale to CGPs and wheeling to Industries from CGPs. So total energy handled through OPTCL system comes to 26971 MU.

Excess/Deficit of Revenue Requirement:

28) OPTCL will be having revenue deficit of **Rs. 316.37 Cr** considering the ARR proposed and the revenue to be earned from wheeling of **26971 MU** at the existing transmission tariff of 25 P/U, the details of which are shown in the Table below.

Table-9

Deficit of Revenue requirement 2018-19

Deficit of Revenue requirement @ 25 P/U present tariff rate (Rs. Cr.)	
Total Aggregate Revenue Requirement	990.65
Less: Revenue earned from Long Term Open Access Customer	674.28
Deficit of Revenue requirement for FY 2018-19 at the existing Rate @ 25 P/U	-316.37

Proposal for revision of Transmission Tariff/ Wheeling Charges

29) OPTCL, with its present transmission tariff, cannot meet its proposed revenue requirement at the existing transmission tariff of 25 P/U. OPTCL submits the proposed ARR, Transmission Tariff and Transmission Loss for FY 2018-19 to be effected from 01.04.2018.

Proposed Schedule of Transmission Charge of OPTCL for FY 2018-19

Transmission Charge:

30) Transmission Charge @ **36.73 P/U** shall be applicable for transmission of power at 400kV/220kV/132kV over OPTCL's EHT transmission system for the purpose of transmission of energy from generator end to the sub-station from where energy will be fed to DISCOMs, Railways and CGPs.

Transmission Loss @**3.25%** for the use of EHT transmission system and for the purpose of transmission of energy from a CGP to its industrial unit located at a separate place as well as for transmission of power from outside the state to an industry located inside the State.

Long Term Open Access Customers & Short Term Open Access Customers shall pay the applicable Transmission Charges plus all other charges and losses as applicable thereon, as the case may be.

Open Access charges:

31) The table below shows the open access charges proposed by OPTCL for FY 2018-19.

Table-10

Abstract of OA Charges Proposed By OPTCL for FY 2018-19

DETAILS	In Rs. Per Unit approach
Net Aggregate Revenue Requirement (Rs. Cr.)	990.65
Proposed Energy to be transmitted in OPTCL Network (MU)	26971
Proposed Transmission Tariff (P/U)	36.73
Power Flow (Equivalent of 26971 MU) in MWs	3079
Long term Open Access Charges in terms of Rs./MW/Day	8815
Short term Open Access Charges in terms of Rs./MW/Day	2204

Besides above Charges, the Open Access customers are also required to pay any other charges as determined by the Commission as per provisions under Chapter-II (CHARGES FOR OPEN ACCESS) of the Regulations 2006.

Rebate:

32) On payment of monthly bill, the Open Access Customer shall be entitled to a rebate of 2% of the amount of the monthly bill (excluding arrears), if full payment is made within two working days (excluding holidays under N.I. Act) of the presentation of the bill and 1% of the amount if paid within 30 days of the presentation of the bill.

Delayed Payment Surcharge:

33) The monthly charges as calculated above together with other charges and surcharge on account of delayed payments, if any, shall be payable within 30 days from the date of bill. If payment is not made within the said period of 30 days, delayed payment surcharge at the rate of 1.25% per month shall be levied pro-rata for the period of delay from the due date, i.e. from the 31st day of the bill, on the amount remaining unpaid (excluding arrears on account of delayed payment surcharge).

Duties and Taxes:

34) The Electricity Duty levied by the Government of Odisha and any other statutory levy/ duty/ tax/ cess/ toll imposed under any law from time to time shall be charged over and above the tariff.

Reactive energy charges

35) The Reactive energy charges have been worked out by OPTCL as **3 paise/KVARh** based on the investment of Rs. 8.9224 Cr. made by OPTCL for procurement and installation of 275 MVAR Capacitor Banks at 20 grid sub-stations. Since during FY 2018-19, there is no plan to install Capacitor Banks at any other grid S/S, OPTCL proposes that **3 paise/KVARh** may be approved provisionally as Reactive Energy Charges FY 2018-19.

True up application for FY 2016-17:

36) OPTCL submitted that due to implementation of “**IND AS**”, the audited accounts of OPTCL for the FY 2016-17 is getting delayed. OPTCL will file the true up

application before the Commission for FY 2016-17 shortly after the audited accounts are available

PRAYER

37) OPTCL's proposal for FY 2018-19 are:

1. Aggregate Revenue Requirement of **Rs.990.65 Cr.**
2. Recovery of Transmission Charge @ **36.73 P/U.**
3. Transmission Loss for wheeling as **3.25%** on energy drawl
