

***Summary of ARR &
Transmission Tariff Filings***

Submitted by

OPTCL

For

FY 2016-17

Summary of OPTCL's ARR & Transmission Tariff filing For FY 2016-17

- 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 Licence 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 has submitted its Aggregate Revenue Requirement & Transmission Tariff application for FY 2016-17 for kind approval of the Commission.

Categorization of Open Access Customers

- 4) 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.
 - (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.

Computation of Transmission Charges

- 5) 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 Gazettee 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 2016-17 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 2016-17 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

- 6) The Employee Expenses for FY 2016-17 estimated as **Rs. 399.56Cr** including Terminal Benefit Liability and possible impact of 7th Pay Commission Report. Presently (as on 01.11.2015) the Men in Position (MIP) of OPTCL is 3003 (Executive-1139 + Non-Executive 1864) against sanctioned strength of 4668 (Executive-1740 + Non-Executive 2998). 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.
- 7) The employee cost details include salaries, dearness allowance, other allowances, stipend, reimbursement of medical expenses and house rent, leave

travel concession, honorarium, Ex-gratia and misc. expenses, staff welfare expenses, wage revision arrear etc.

Administrative and General (A&G) Expenses

- 8) 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. 25.58 Cr** towards A&G Expenses for FY 2016-17.

Repair and Maintenance (R & M) Expenses

- 9) 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 2016-17 is **Rs.170.66Cr**, as shown in the **Table-1** below:

**Table-1
Repairs and Maintenance Expenses for FY 2016-17 (Rs.Cr)**

Particulars	OERC Approval (FY 2014-15)	OERC Approval (FY 2015-16)	Projection (FY 2016-17)
(i) O&M	93.00	108.00	143.62
(ii) Telecom			10.39
(iii) Civil Works			8.85
(iv) Information Technology			7.80
Total R&M Expenses			Rs. 170.66Cr.

Expenses related to auxiliary energy consumption in the sub-stations

- 10) The auxiliary energy consumption in the sub-stations for the FY 2014-15, FY 2015-16 (up to Sept-15) is 10.75MU & 6.71MU respectively. It is estimated that the auxiliary energy consumption for the FY 2016-17 will be about 14 MU. OPTCL proposes Rs. 3.82 Cr towards auxiliary energy consumption in the sub-stations.

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

- 11) **Grid Coordination Committee (GCC) Expenses:** Under (GCC) expenses, OPTCL proposes **Rs. 0.84 Cr** towards annual GCC Expenses for FY 2016-17 in line with the said provisions.
- 12) **Corporate Social Responsibility (CSR):** The amount estimated to be spent is about **Rs.1.57 Cr.** for FY 2016-17 considering 2% of the average profit of about Rs.78.62Cr. during last 3 years which is included in miscellaneous expenditure under A&G expenses in FY 2016-17.

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 & CSR expenses, OPTCL proposes the O&M Expenses as **Rs.602.03Cr.** The summary of O&M Expenses for FY 2016-17 is shown in the **Table-2** below:

Table-2
Summary of O&M Expenses for FY 2016-17

Particulars	Amount (Rs. Cr.)
(i) Employees Cost including Terminal Benefits	399.56
(ii) A&G Cost	25.58
(iii) R&M Cost	170.66
(iv) Expenses related to auxiliary energy consumption in sub-stations	3.82
(v) Other miscellaneous expenses, statutory levies and taxes(GCC& CSR)	2.41
Total O&M Expenses	Rs. 602.03Cr.

Interest and Financial Charges

13) **Interest on Loan**

Interest on loan for FY 2016-17 has been projected as **Rs.124.55Cr.** Details of interest on loan capital are shown in the **Table-3** below:

Table-3
Interest on Loan for FY 2016-17

Projection for Interest on loan for FY 2016-17(Rs. Cr.)							
		Rate of Interest (%)	Principal CB as on 31.03.16 (Rs. Cr)	Loan to be received (2016-17) (Rs. Cr)	Loan to be redeemed (2016-17) (Rs. Cr)	Interest payment (2016-17) (%)	Total Payment (2016-17) (Rs. Cr)
A	Govt. Loans						
	State Govt. (Cash Loan)	13.00%	2			0.26	0.26
	State Govt.(CRF)	0.00%	15				0
	GoO Bonds	13.00%	400			26	26
	Sub-Total		417.00			26.26	26.26
B	Institutional Loans						
	Bank of India	9.75%	95.39	194.61		18.88	18.88
	REC Loan		314.62		32.83	43.78	76.61
	PFC Loan		84.40		7.08	7.67	14.75

	JICA	0.80%	0	213.26		0.85	0.85
	Sub-Total		521.41	407.87	39.91	71.18	111.09
C	Secured Loan						
	New Loan (14-15)	11.90%	147.28			14.65	14.65
	New Loan (15-16)	11.90%		505.10		12.46	12.46
	Sub-Total		147.28	505.10	0	27.11	27.11
D	Grand Total		1085.69	912.97	39.91	124.55	164.46

14) **Interest on Working Capital:**

The Working Capital is estimated as Rs.273.98Cr. The interest on working capital for one month receivable works out to Rs.35.62 Cr. considering interest rate of 13.00%. OPTCL proposes Rs.17.81 Cr towards interest on working capital for 15 days on receivable i.e. half of Rs.35.62 Crore.

- 15) **Rebate:** OPTCL has projected 2% rebate amounting to **Rs.19.50Cr.** which is calculated based on the projected ARR for the FY 2016-17.

New Projects

- 16) OPTCL proposes to spend **Rs.1014.97Cr.** during FY 2016-17 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-4** below:

Table-4
Projected CAPEX for new projects - FY 2016-17

Particulars	Amount (Rs. Cr.)
(i) Telecom	101.25
(ii) O&M	119.39
(iii) Information Technology (IT)	30.64
(iv) Civil Works	17.67
(v) Construction	746.02
Total Capital Expenditure [(i)+(ii)+(iii)+(iv)+(v)]	Rs.1014.97 Cr.

- 17) **CAPEX for telecom related projects:** The CAPEX proposal for the FY 2016-17 in respect of Telecommunication work is summarized as follows:

1. Integration of 30 Grid S/S, Control Center hardware/software up-gradation and establishment of back-up Control Centre at Meramundali for SLDC

2. Provision of SCADA interface point at 220 kV Grid S/S through OPGW
3. Reframing of Microwave by Optic Fibre under ULDC Project
4. SCADA Interface Points at vital 132kV Sub-Stations of OPTCL by laying OPGW Cable
5. Provision of Digital Protection in all 220kV lines through SDH Equipment
6. Laying of OPGW to balance 132/220/400Kv S/S of OPTCL (App. 6589km)
7. Infrastructure provision of SCADA for up-coming Industries
8. Provision of Digital Tele-protection coupler in all 220kV lines
9. Provision of phase wise replacement of RTU
10. Phase wise replacement of 8 core OPGW by 24 core OPGW
11. Installation of PMUs in all 220kV and above kV lines of OPTCL

Provision of **Rs. 101.25 Cr.** is proposed for FY 2016-17 towards CAPEX pertaining to Telecommunication Wing, the details of which are shown in the **Table-5** below:

Table -5
CAPEX - TELECOM PROJECTS - FY 2016-17

ITEM	Amount (Rs. Cr.)
SCADA interface points at vital 132kV s/s by laying OPGW cable (1745 km.)	30.00
Laying OPGW to balance 132/220/400kV s/s (Approx. 6589km.)	45.31
Infrastructure provision of SCADA for upcoming industries	2.40
Provision of Digital Tele-protection coupler in all 220kV lines	5.91
Provision of phase-wise replacement of old RTU	2.75
Phase-wise replacement of 8 core OPGW by 24 core OPGW	10.83
Installation of PMUs in all 220kV & above voltage level s/s	4.05
Total	Rs. 101.25 Cr.

- 18) **CAPEX for O&M related projects:** An amount of **Rs. 119.40 Cr.** has been proposed for the FY 2016-17 under CAPEX to meet the future load growth the details of item wise CAPEX for O&M related projects are shown in the **Table-6** below.

Table-6
CAPEX - O&M PROJECTS - FY 2016-17

Sl. No.	Description	Unit Rate (Lakh)	Quantity	Amount (Rs. Lakh)

1	PROCUREMENT OF TRANSFORMERS WITH COST OF ERECTION			
(i)	Procurement of 160 MVA, 220/132kV	715.00	2	1,430.00
(ii)	Procurement of 63 MVA, 132/33kV	363.00	2	726.00
(iii)	Procurement of 40 MVA, 132/33kV	300.30	11	3,303.30
(iv)	Procurement of 40 MVA, 220/33kV	335.50	1	335.50
(v)	Procurement of 20 MVA, 132/33kV	165.00	5	825.00
(vi)	Cost of construction of Bays	LS		700.00
2	PROCUREMENT OF TRANSFORMERS TO MEET EMERGENCY SITUATION			
(i)	Procurement of 160 MVA- 2 nos., 40 MVA - 5 nos, 20MVA-2 nos Transformers	LS		3,743.00
3	CONVERSION OF S/C (DC TOWERS) TO D/C WITH BOTH END BAYS			
(i)	132kV Kendrapara - Pattamundai (19.5 RKM)	LS		289.00
4	UPRATING OF CONDUCTOR WITH HTLS			
(i)	132kV Ranasinghpur - Kesura SC (26.36 RKM)	LS		481.00
5	CONSTRUCTION OF BAYS AT GRID SUBSTATIONS			
(i)	LILO of 132kV Burla - Chipilima Tie Line (Ckt - D) to Katapali Grid with connecting Bays	LS		108.00
	TOTAL			11,940.80 = Rs. 119.40 Cr.

- 19) **CAPEX for Information Technology (IT) related projects:** Provision of **Rs. 30.64 Cr.** is made for FY 2016-17 towards CAPEX for infrastructure development of IT and automation related fields etc. as given in the **Table-7** below:

Table-7
CAPEX - IT PROJECTS - FY 2016-17

Sl. No.	Item Description	Amount (Rs Cr.)
1	Geographical Information System (GIS)	5.700
2	Analytics (Business Intelligence)	3.500
3	Primary Data Center	4.500
4	Disaster Recovery Data Center	7.000
5	End-User IT Systems	3.000
6	Network (OGS-WAN)	0.820
7	IT Security	0.500
8	Smart Grid Initiatives (AMI)	1.000
9	Other IT Initiatives:	
a)	CCTV & VC	4.566
b)	DMS	0.050
TOTAL		Rs. 30.64 Cr.

- 20) **CAPEX for civil works:** OPTCL proposes CAPEX of **Rs. 17.67 Cr.** relating to Civil Works during FY 2016-17 for new upcoming projects which have been detailed in **Table-8** below.

Table-8
CAPEX - CIVIL WORKS PROJECTS - FY 2016-17

Sl. No.	Description of works	Amount (Rs. Cr.)
1	Construction of re-alignment of approach roads & related work	0.45
2	Construction of Boundary and Compound Wall related work	0.98
3	Water supply system, sewerage system and drainage related work	0.31
4	Renovation & Construction of offices, staff qrs., stores	2.56
5	Construction of PEB,GRIDCO,BBSR	3.37
6	Construction of Tech Tower, BBSR	10.00
TOTAL		Rs. 17.67 Cr.

- 21) **CAPEX for construction wing:** It has been planned to spend an amount of **Rs. 744.62 Cr.** on transmission related infrastructure during FY 2016-17 to increase the overall system capacity and to strengthen the transmission system network of the state, the details of which are shown in the **Table-9** below.

Table-9
CAPEX FOR CONSTRUCTION WING PROJECTS- FY 2016-17

Sl. No.	Description of the Project/Scheme	Expenditure during FY 2015-16 (Rs. Cr)			projected Expenditure FY 2016-17(Rs. Cr)
		Actual for First Six Months	Projection for Balance Six Months	Total	
A	ONGOING SCHEME				
1	2	3	4	5=3+4	6
1	400kV Meramundali- DuburiD/C line	-	4.00	4.00	
2	132/33kV Khajuriakata(Hindol Road) S/S with line	3.20	7.50	10.70	
3	400kV IB- Meramundali D/C line	-	1.20	1.20	
4	Diversion of 132kV Dhenkanal-Nuapatna line with 132KV Bay Extension at Nuapatna	0.06	3.50	3.56	
5	Conversion of 132/33kV Somanathpur Sw-Stn to S/S	1.14	2.00	3.14	
6	2x12.5MVA ,132/33kV UdalaS/S with LILO	-	1.00	1.00	8.00

7	132kV Bhadrak - Anandpur S/C line	1.98	6.00	7.98	15.27
8	132/33kV Olaver S/S & 132kV Pattamundai-Olavar line with Bay Extension at Pattamundai	1.89	3.00	4.89	2.00
9	132/33kV Agarpada S/S with LILO	1.48	7.00	8.48	15.00
10	2x20MVA, 132/33kV Bhograi S/S with LILO	3.88	5.00	8.88	14.00
11	132kV Kuchei PG-Jaleswar D/C line & 2 nos. 132kV Bay Extension	6.04	3.50	9.54	5.50
12	220/132/33kV Puri (Samangara) S/S with line	35.51	5.00	40.51	1.00
13	220/132/33kV Atri (Karadagadia)S/Swith LILO	10.88	5.00	15.88	5.00
14	2x160MVA, 220/132kV Mendhasal S/S with line	1.24	1.00	2.24	
15	220/132/33kV Pratapsasan S/S with line	1.30	8.00	9.30	15.00
16	3rd ICT at 400/220kV Mendhasal S/S	3.93	5.00	8.93	10.15
17	220kV Bidanasi-Cuttack D/C line	2.04	3.00	5.04	
18	220/132kV Cuttack (Nuapada) S/S & 220KV Bay Extensions at Bidanasi	0.24	5.50	5.74	2.00
19	132/33kV Marshaghai S/S with LILO	4.52	2.50	7.02	
20	132kV Bay Extensions at Salipur&Kendrapara with lines	0.07	4.50	4.57	
21	132kV Nuapatna-Banki S/C line	1.32	4.00	5.32	10.63
22	2X20MVA, 132/33kV R.Udayagiri S/Swith line	8.81	7.00	15.81	23.67
23	Conversion of existing 132kV Balasore- Somathpur S/C line to D/C line & 132kV Bay Extensions	-	2.00	2.00	-
24	220/33kV Narasinghpur S/S with LILO	0.13	6.00	6.13	16.87
25	132/33 kV Bangiriposhi S/S with line	1.27	3.00	4.27	9.00
26	132/33kV Dhenkikote S/S with line	-	6.00	6.00	27.93
27	2x20MVA,132/33kV Brajabiharipur , Cuttack (old site CDA) S/S	-	3.50	3.50	20.00
28	220/33kV Baliguda S/S with line	8.75	5.00	13.75	35.00
29	2x20MVA, 132/33kV Satasankha (puri) S/S with line	-	2.00	2.00	25.00
30	132/33kV Tirtol S/S with LILO	-	2.00	2.00	15.00
31	132/33kV Chikiti S/S withline	-	5.00	5.00	22.00
32	132/33kV Betonati S/S with line	0.29	4.00	4.29	5.00
33	220/132/33kV Aska S/S with line	6.86	10.00	16.86	30.00
34	220/132/33kV Chandaka-B (Bhubaneswar) GIS S/S	5.63	35.00	40.63	35.00
35	220kV Atri-Pandiabil D/C line	6.82	-	6.82	
36	220/132/33kV GodaChhak S/S with line	-	4.00	4.00	15.00

37	400/220KV Duburi(New) S/S & Bay Extension Work at Meramundali	-	1.00	1.00	
38	132/33kV Boudh S/S with Line	-	0.05	0.05	
39	132/33kV Padampur S/S with line	0.09	7.00	7.09	3.00
40	220/132kV Kesinga S/S with line	0.79	10.00	10.79	10.00
41	132/33kV Kantabanji S/S with line	1.16	10.00	11.16	4.00
42	220/132/33kV Baragarh(New) S/S	0.75	10.00	10.75	15.00
43	132kV Pottangi S/S with line	2.91	11.00	13.91	0.10
44	132kV Umerkote S/S with line	4.87	0.10	4.97	
45	2nd 220kV Indravati-Therubali D/Cline		1.50	1.50	1.00
46	132/33kV Podagada S/S with line	2.99	14.00	16.99	1.00
47	220kV Jayanagar(OPTCL)-Jaynagar (PGCIL) line & 2 nos. 220kV feeder bays	0.37	5.00	5.37	5.00
48	Conversion of existing Jaynagar-Sunabeda S/C line to D/C line	3.50	5.00	8.50	1.00
49	220/33kV Malkanagiri S/S with line	0.84	15.00	15.84	10.00
50	2x20MVA ,132/33kV Muniguda S/S with LILO	0.42	5.00	5.42	10.00
51	2x20MVA,132/33kV Kalunga S/S with LILO	0.04	4.00	4.04	
52	2x40MVA,220/33kV Bonai S/S with LILO	0.10	2.00	2.10	8.00
53	220/132kV Lapanga S/S with lines	0.93	7.00	7.93	
54	Conversion of 132/11kV S/S to 2x40MVA, 132/33kV S/S at Sarasmal(Jharsuguda)	1.24	2.00	3.24	4.00
55	Transformer bay at 220/33kV Laxmipur S/S	0.22	2.00	2.22	3.00
56	2x12.5MVA, 220/33kV Kasipur S/S with LILO	0.06	5.00	5.06	10.00
57	132kV Junagarh-Kesinga S/C line	2.47	2.00	4.47	10.00
58	2X20MVA, 132/33kV Boriguma S/S with LILO	-	5.00	5.00	8.00
59	2x20MVA, 220/33kV Jaypatna S/S with line	6.95	5.00	11.95	7.00
60	220/33kV Kalimela S/S with line	-	5.00	5.00	7.00
61	132kV Jayanagar -Tentulikhunti S/C line	-	6.00	6.00	8.00
62	132/33kV Birmaharajpur S/S with line	0.01	4.00	4.01	7.00
63	132/33kV Tusura S/S with line	2.76	4.00	6.76	10.00
64	132kV Nuapada-Padampur S/C line	-	3.00	3.00	5.00
65	400/220kV Lapanga S/S with line	7.48	2.00	9.48	15.00
66	132/33kV Ghens S/S with line	3.08	4.00	7.08	15.00
67	132 kV Podagada-Pottangi S/C line	-	0.05	0.05	5.00
68	220 kV Pandiabil-Pratapsasan Line	2.74	2.00	4.74	12.00
69	132/33kV Banki S/S with line	0.84	0.50	1.34	
70	Other Works	4.46	2.50	6.96	
	TOTAL - A	171.35	343.40	514.75	577.12
B	NEW PROJECTS				

1	400/220 kV Meramundali- B GIS S/S with line				10.00
2	132/33kV Unit-8 (Bhubaneswar)GIS S/S with line		-	-	10.00
3	132/33kV Rasulgarh(Bhubaneswar) GIS S/S with line		-	-	5.00
4	132kV Phulbani-Boudh S/C line				7.00
5	132/33kV AthagarhGIS S/S& associated LILO		5.00	5.00	15.00
6	220/33kV KeonjharGIS S/S &associated line		5.00	5.00	15.00
7	132/33kV ChandbaliGIS S/S & associated line		0.10	0.10	2.00
8	220/132kV Dhenkanal(New) S/S & associatedline			-	2.00
9	132/33kV RajnagarS/S & associated line		0.03	0.03	5.00
10	132/33kV BahugramS/S& associated Line		0.03	0.03	5.00
11	132/33kV Chandipur S/S& associated line		0.03	0.03	2.00
12	132/33kV G.Udayagiri S/S & associated line	0.01	0.03	0.04	5.00
13	132/33kV GondiaS/S & associated line		0.03	0.03	5.00
14	220/33kV DasapallaS/S with line		0.50	0.50	1.00
15	220/132/33kV KuakhiaGIS S/S with line		0.50	0.50	2.00
16	220/132/33kV Kiakata S/S with line		0.70	0.70	2.00
17	440/220kV Bhadrak (Ramakrushnapur) GIS S/Swith line		0.75	0.75	2.00
18	400/220kV Berhampur(Narendrapur) S/S with line		0.20	0.20	2.00
19	132kV Kuchei(PGCIL)-Baripada DC line		0.03	0.03	3.00
20	2x20 MVA, 132/33kV ManeswarS/S with LILO			-	1.00
21	220/33kV Deogarh S/S with line			-	1.00
22	220/33kV LephripadaS/Swith line			-	1.00
23	132/33kV Thuapalli S/S with line	-	0.20	0.20	1.00
24	132/33kV ThuamularampurS/S with associated line		0.10	0.10	0.50
25	220/132 kV Gunupur S/S with associated line	0.02	0.50	0.52	5.00
26	220/33kV Govindpalli S/S with associated line	-	0.10	0.10	0.50
27	132/33kVLakhanpur S/S with line			-	1.00
28	220/33KV S/S at Turumunga with associated line				1.00
	TOTAL - B	0.03	13.83	13.86	112.00
	TOTAL - A+B	171.38	357.23	528.61	689.12
C	DEPOSIT WORK				

1	EHT line diversion for Haridaspur-Paradeep Rly. line	-	1.00	1.00	
2	132/33kV S/S at Samuka Beach(Puri)with LILO	0.73	4.60	5.33	
3	132/33kV Konark S/S with line	2.65	5.00	7.65	
4	3x40 MVA, 132/33kV Arugul S/S with line	0.25	2.00	2.25	
5	220/33kV Infocity-II GIS(IDCO) S/S with line	7.21	12.00	19.21	2.00
6	132/33kV Mania (Tangi) S/S	1.93	9.50	11.43	
7	RTSS at Boinda	-	1.00	1.00	2.00
8	RTSS at Talcher Road	-	0.50	0.50	1.50
9	RTSS at Malatipatapur	-	0.50	0.50	1.50
10	RTSS at Kendrapara	-	0.50	0.50	1.50
11	RTSS at Kamakhyanagar	-	0.50	0.50	1.50
12	RTSS at Rairakhhol	-	0.50	0.50	1.50
13	RTSS at Belpahar	0.81	1.00	1.81	2.00
14	220/33kV Basundhara S/S with line	0.05	2.25	2.30	
15	RTSS at Rengali		0.10	0.10	4.00
16	RTSS at Bimalagarh	2.32	2.00	4.32	4.00
17	RTSS at Bissam Cuttack	-	5.00	5.00	10.00
18	RTSS at Rayagada	-	2.00	2.00	10.00
19	RTSS at Lanjigada	-	10.00	10.00	10.00
20	RTSS at Kechobahal		0.10	0.10	4.00
	TOTAL - C	15.95	60.05	76.00	55.50
	TOTAL - D = A+B+C	187.33	417.28	604.61	744.62

Depreciation

- 22) OPTCL has projected depreciation for FY 2016-17 considering the rate of depreciation prescribed by OERC on the book value of the assets and additions thereto as per Regulation 8.38 and 8.34 of OERC Regulations, 2014. Accordingly, the transmission licensee has projected depreciation at **Rs.150.50 Cr** based on the estimated book value of assets of Rs.4434.89 crore for FY 2016-17 (Rs.3471.26 crore gross block as on 01-04-2015 plus Rs.963.63 crore projected for addition during FY 2015-16).

Return on Equity

- 23) 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 crore. Through infusion of additional capital by the state government, the paid up equity capital of OPTCL has increased to Rs. 353.07 Cr as on 31.03.2015 as per the Provisional Account. Government of Odisha has committed to provide funds of Rs. 300 Cr. as equity over the five year period FY 2011-16 i.e. Rs. 60 Cr. annually. By the end of 2016, OPTCL has received Rs.249.93Cr. and balance of Rs.50.07Cr. will be received in FY 2016-17. Accordingly, OPTCL proposes Return on Equity (RoE) of Rs.68.62 Cr. during FY 2016-17@ 19.61% as per clause 8.28 of Regulations, 2014 on Rs.349.93 Cr. (Rs. 410.00Cr- Rs.60.07 Cr) i.e. on opening balance of FY 2016-17.

INCOME TAX

- 24) **As per the Regulation 8.43 of OERC Regulations, 2014**, Income tax of the Transmission Licensee shall be recovered from the beneficiaries. It is submitted that OPTCL has projected Rs.7.79 Cr. for the FY 2014-15 towards Income Tax under section 115JB of Income Tax Act, 1961. For the FY 2016-17 same amount of **Rs.7.79 Cr** is projected to be considered in the ARR.

TRANSMISSION COST

- 25) Considering the proposed cost / expenses under different heads, the Transmission Cost of OPTCL for FY 2016-17 is worked out as **Rs.990.81Cr**. Details are shown in the **Table-10** below:

Other Costs:

Incentive for system availability:

- 26) **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 TAFY for the year 2014-15 as 99.95. 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.9.19 Cr.** towards system availability for the year 2014-15 using approved ARR figure of Rs. 624.50 Cr. for the said year. Hence, OPTCL proposes **Rs. 9.19 Cr** towards Incentive for System Availability to be allowed in the ARR for FY 2016-17.

Contingency reserve:

- 27) As per the observation of the Commission in para 237 of ARR order for FY 2015-16, OPTCL is not claiming any amount under Contingency Reserve as Commission will allow the actual expenditure in the true up as and when spent by OPTCL.

Other income and cost / Miscellaneous receipt:

- 28) During 1st six months of FY 2015-16, miscellaneous receipt of OPTCL from different sources is about Rs.16.01Cr. Based on the trend of revenue earning during FY 2015-16, OPTCL proposes miscellaneous receipt of **Rs. 25.00Cr** during FY 2016-17. The summary of Aggregate Revenue Requirement of OPTCL for FY 2016-17 is shown in the **Table-10** below adding all the projected expenditures as explained in foregoing paragraphs:

Table-10
Summary of Aggregate Revenue Requirement of OPTCL for FY 2016-17

ITEMS	Amount (Rs. Cr)	
A) FIXED COST		
1. O&M Expenses		602.03
(i) Employees Cost including Terminal Benefits	399.56	
(ii) A&G Cost	25.58	
(iii) R&M Cost	170.66	
(iv) Expenses related to auxiliary energy consumption	3.82	
(v) Other miscellaneous expenses, statutory levies and taxes (GCC & CSR)	2.41	
2. Interest & Financial Charges		161.86
(i) Interest on Loan Capital	124.55	
(ii) Interest on Working Capital	17.81	
(iii) Rebate	19.50	
3. Depreciation		150.50
4. Return on Equity		68.62
5. Income Tax		7.79
Sub-Total (A)		990.81
B) Others		
Incentive for system availability		9.19
Total Trans. Cost (A+B)		1000.00
C) Less Misc. Receipts		25.00
D) ARR to be recovered from LTOA Customers i.e. OPTCL's Aggregate Revenue Requirement		975.00

Transmission loss:

- 29) The actual transmission loss in the OPTCL's transmission system from April'15 to September'15 is 3.71% against Commission's approval of 3.75% for FY 2015-16. OPTCL expects the loss level to be around 3.75% in the current year. Accordingly, OPTCL proposes **3.70%** transmission loss during FY 2016-17.

Estimation of revenue receipt and deficit of ARR at the existing transmission charge @ 25 Paisa/Unit

OPTCL in the present application has taken the recent realistic demand projection of all four DISCOMs totalling 25468 MU for FY 2016-17. OPTCL envisages 150MU 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. Hence, total MU to be transmitted in OPTCL network gets reduced to 25318 MU (25468-150) from the total demand projection of DISCOMs. Further, OPTCL proposes that the CGPs like IMFA and NALCO will avail 10 MU emergency power for their CGPs and also wheeled their surplus power of 450 MU from their CGPs to load centre at different places. The revenue to be earned by OPTCL from wheeling of **25778 MU**(25318+450+10) at the existing transmission tariff of 25 P/U will be **Rs.644.45 Cr.**

Excess/Deficit of Revenue Requirement:

- 30) OPTCL will be having revenue deficit of **Rs.330.55Cr** considering the ARR proposed and the revenue to be earned from wheeling of **25778 MU** at the existing transmission tariff of 25 P/U, the details of which are shown in **Table-11** below.

Table-11

Deficit of Revenue requirement 2016-17

Deficit of Revenue requirement @ 25 P/U present tariff rate	
Details	Amount (Rs. Cr)
Total Annual Revenue Requirement	975.00
Less: Revenue earned from Long Term Open Access Customer	644.45
Deficit of Revenue requirement for FY 2016-17 at the existing Rate @ 25 P/U	-330.55

Proposal for revision of Transmission Tariff/ Wheeling Charges

- 31) OPTCL submitted that it cannot meet its proposed revenue requirement at the existing transmission tariff of 25 P/U and will suffer revenue deficit of Rs.330.55 crore. In order to meet the deficit., OPTC submitted the before the Commission to approve the proposed ARR and Transmission Tariff and Transmission Loss for FY 2016-17 to be effective from 01.04.2016 as mentioned table-12 below:-

Table-12

ABSTRACT OF OA CHARGES PROPOSED BY OPTCL FOR FY 2016-17

DETAILS	In Rs. Per Unit approach
Net Annual Revenue Requirement (Rs. Cr.)	975.00
Proposed Energy to be transmitted in OPTCL Network (MU)	25778

Proposed Transmission Tariff (P/U)	37.82
Power Flow (Equivalent of 25778 MU) in MWs	2943
Long term Open Access Charges in terms of Rs./MW/Day	9078
Short term Open Access Charges in terms of Rs./MW/Day	2269

Reactive energy charges

- 32) OPTCL proposes that in accordance with Regulation 1.7 of said OGC Regulations, the Reactive Energy Charges be considered to be fixed at **6.75 Paise / kVArh** for the FY 2016-17, i.e. an escalation of 0.25 Paise / kVArh over the approved provisional rate for FY 2015-16.

Rebate:

- 33) 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:

- 34) 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:

- 35) 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.

Summary of Transmission Tariff Proposal:

- 36) OPTCL's proposal for FY 2016-17 are:
1. Aggregate Revenue Requirement of **Rs.975.00Cr.**
 2. Recovery of Transmission Charge@**37.82 P/U.**
 3. Transmission Loss for wheeling as **3.70%** on energy drawl
