

**BEFORE THE ODISHA ELECTRICITY REGULATORY COMMISSION
BHUBANESWAR**

**Case No.-----
Filing No. 1**

IN THE MATTER OF: An application for approval of Annual Revenue Requirement and Transmission Tariff for the Financial Year 2013-14 under Section 62, 64 and all other applicable provisions of the Electricity Act, 2003 read with relevant provisions of OERC (Terms and Conditions for Determination of Tariff) Regulations, 2004 and OERC (Conduct of Business) Regulations, 2004, and other tariff related matters.

AND

IN THE MATTER OF: Odisha Power Transmission Corporation Limited, Janpath, and Bhubaneswar-751022.

... Applicant

The Humble Applicant above named;

MOST RESPECTFULLY SHEWETH THAT:

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 (hereinafter called the "**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.- hereinafter referred to as "GRIDCO") has been transferred and vested in Odisha Power Transmission Corporation Limited (hereinafter called "OPTCL").

As per Clause 10 of the Transfer Scheme, the OPTCL is a deemed Transmission Licensee under Section 14 of the Electricity Act, 2003 (hereinafter referred to as 'Act') for undertaking the business to transmit electricity in the State of Odisha. OPTCL has also been notified as the State Transmission Utility (hereinafter called 'STU') and accordingly, shall discharge the State Load Dispatch functions from the date of transfer till further orders of the State Government.

Hon'ble Odisha Electricity Regulatory Commission (hereinafter called 'OERC') has issued Licence Conditions of OPTCL vide its order dated 27.10.2006 passed in Case No 22 of 2006 to undertake the activities relating to transmission of electricity in the State of Odisha.

Consequent upon transfer of Transmission Undertaking and functions to OPTCL as per the Transfer Scheme, all the obligations under Bulk Supply Agreement dated 18.09.1999 between

GRIDCO & CESCO (now the Central Electricity Supply Utility of Orissa - "CESU") and between GRIDCO & WESCO, GRIDCO & NESCO, GRIDCO and SOUTHCO on dated 24.05.1999 including all other contracts of GRIDCO with any party other than those four Distribution Licensees, in so far they relate to transmission of electricity and matter connected therewith including the provisions dealing with operating arrangements, connections & metering, rights of access, non-interfering with the equipments etc. is required to be discharged by OPTCL in the same manner as GRIDCO was doing / performing under the said agreements and also as per the Regulations, orders and directions of OERC made from time to time and all such services shall be rendered by OPTCL to GRIDCO.

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 (effective from 01.11.2006) approved by Hon'ble OERC vide order dated 27.10.2006 in Case No. 22 of 2006, OPTCL is required to submit its Annual Revenue Requirement (ARR) application for the ensuing year before Hon'ble OERC for approval.

In consonance with the above, OPTCL herewith submits its Annual Revenue Requirement & Transmission Tariff application for FY 2013-14 for kind approval of the Hon'ble Commission.

CATEGORISATION OF CUSTOMERS

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 Inter-State / Intra-State Transmission System **for a period of 25 years or more**. Based on such premise, four DISCOMs & Captive Generating Plants (CGPs) 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 Inter-State / Intra-State Transmission is **one year** with a condition to reapply after expiry of the term.

TRANSMISSION CHARGE:

In a significant departure from the past, the Tariff Policy, 2006 framed under the Act has embodied the National Tariff Framework which provides that the transmission tariff is to be sensitive to distance, direction and related to quantum of power flow in a transmission service network. Para 7(1) (3) of the Tariff Policy provides for Transmission Charges to be determined on MW per circuit kilometer basis, zonal Postage Stamp basis, or on the basis of some other pragmatic variant, the ultimate objective being to get the transmission system users to share the

total transmission cost in proportion to their respective utilization of the transmission system. The overall tariff framework should be such as not to inhibit planned development/augmentation of the transmission system, but should discourage non-optimal transmission investment.

Every year, OPTCL has been following the Postage Stamp Method to work out Transmission Charges while seeking Hon'ble Commission's approval of its ARR & Transmission Charges.

The Hon'ble OERC has not yet framed any separate Regulations for determination of Intra-State Transmission Tariff to be charged by a Transmission Licensee. In such situation, OPTCL, the deemed Transmission Licensee, is guided by the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "CERC Regulations, 2009") applicable for Transmission Tariff. In view of the above, OPTCL has formulated its ARR & Transmission Tariff Application for FY 2013-14 as per the related provisions pertaining to the conduct of Business and Tariff determination as provided under OERC Regulations, 2004 dated 09.06.2004 and as per the CERC Regulations, 2009 respectively.

The costs of the deemed Transmission Licensee OPTCL for the FY 2013-14 for deriving the ARR and Transmission Tariff have been categorized under the following heads:

A. FIXED CHARGES:

- 1) Operation & Maintenance (O & M) Expenses
- 2) Interest on Loan Capital
- 3) Depreciation
- 4) Special appropriation
- 5) Return on Equity
- 6) Interest on Working Capital

B. ADDITIONAL EXPENSES:

- 1) Contingency Reserve
- 2) Grid Co-ordination Committee (GCC) Expense
- 3) Incentive for System Availability

COMPUTATION OF TRANSMISSION CHARGES:

A) FIXED CHARGES:

The Fixed Charges of OPTCL include expenses incurred towards Operation & Maintenance (Employee Cost including Terminal Benefits, Administration & General Expenses and Repairs & Maintenance Expenses). The details of such expenses for FY 2013-14 are projected as under: -

A.1) O&M EXPENSES:

As per CERC Regulations, 2009, Operation and Maintenance (O&M) Expenses means the expenditure incurred on operation and maintenance of the project, or part thereof, and **includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads.**

Accordingly, OPTCL proposes **O & M Expenses** under the following heads:

I. EMPLOYEE COST INCLUDING TERMINAL BENEFITS**II. ADMINISTRATION & GENERAL EXPENSES****III. REPAIR & MAINTENANCE EXPENSES****I. EMPLOYEE COST INCLUDING TERMINAL BENEFITS:**

The Employee Cost include Salaries, Dearness Allowance, Conveyance Allowance, Medical Allowance, Bonus / Ex-gratia etc. The Employee Expenses for FY 2013-14 estimated as **Rs.182.35 Crore** excluding Terminal Benefit Liability.

Presently the Men in Position (MIP) of OPTCL is 3300 as on 01.11.2012 out of which 1061 nos. are Executives and 2239 nos. are Non-Executive against sanctioned strength of 5552 nos.(Executives- 1562 nos. + 3390 nos.- Non-Executives).

A significant number of posts are lying vacant in different ranks due to retirement, death, promotion etc. as a result of which the 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. In the mean time some additional manpower has been inducted and more will be recruited in coming years.

Due to rapid industrialization, urbanisation and rural electrification initiatives in the State under Central as well as State sponsored schemes, there has been manifold increase in the demand of power. In order to cater to the increasing demand of power, several new grid sub-stations and transmission lines have been commissioned and many others are at different stages of implementation. The increased transmission infrastructure badly requires adequate competent personnel in Technical, Finance, HRD, IT and other relevant streams. In order to align OPTCL's organizational structure in line with the emerging needs of the transmission sector and dynamic regulatory framework in India, OPTCL has assigned the National Productivity Council (NPC) to study the current organizational structure and carry out a comprehensive organizational restructuring to meet the emerging demands of the sector and to meet the emerging needs of important aspects of the transmission utility like Project Implementation, O&M, Telecom, Finance and IT support etc. NPC has since submitted the final report. This has been submitted to Govt. for approval.

The component wise details of Employee Cost are given in **TRF-13** and the abstract is shown in **Table-1** below:

Table - 1					
Employee Cost for FY 2013-14					(Rs. Cr)
Sl. No.	Particulars	FY 11-12	FY 12-13	FY 13-14	Assumption
		(Prov.)	(Estt.)	(Estt.)	(% increase over last FY)
1	Salaries (Basic and Grade Pay)	67.13	67.71	69.74	3% Increase (Basic & Grade pay) in 2012-13 and 3% increase in 2013-14
2	Overtime				
3	Dearness Allowance	32.83	48.75	59.98	72% for 2012-13 & 86% for 2013-14 (assuming same % increase as of last year i.e. 7% during Jan' 13+7% during July' 13)
4	Other Allowance	0.59	0.60	0.69	15% increase
5	Bonus	0	0.01	0.01	15% increase
6	Provision towards Wage Revision for Non executive w.e.f.1.4.2010			14.09	Wage revision for FY 2010-11, 2011-12, 2012-13.
7	Enhanced in Salary due to implementation of NPC structure for executive & non executive			14.00	Details Sheet Enclosed
8	Sub-Total (1 to 7)	100.55	117.07	158.51	
	OTHER STAFF COST				
9	Reimbursement of Medical Expenses	3.55	3.38	3.49	5% of (Basic & Grade Pay) w.e.f 01.12.2008
10	Leave Travel Concession	0.19	0.59	0.59	As per Budget
11	House Rent allowance	8.20	13.5	13.95	20% HRA(Basic & Grade pay) for employees w.e.f. 01.12.2008
12	Premium under Group Insurance scheme	0.18	0.22	0.26	20% increase
13	Stipend to Management Trainee(Executive)			1.06	48 JMsRs.10,000/- PM + 39 AM x Rs.15,000/- PM
14	Stipend for new recruited Non-Executive Trainee			1.62	300 ITI Technician @ Rs.6,000/- PM (150no.- full year and 150no.- 6 months)
15	Honorarium		0.01	0.01	As per Budget
16	Payment under Workmen compensation Act		0.02	0.02	20% increase/ As per Budget
17	Ex-gratia	0.04	0.01	0.01	As per Budget
18	Uniform & Liveries	1.27	1.55	1.39	Implementation of Dress Code
19	Miscellaneous	0.86	1.03	1.24	20% increase
21	Staff Welfare Expenses including sports expenses	0.19	0.2	0.2	As per Budget
	TOTAL	115.03	137.58	182.35	

(B) TERMINAL BENEFIT:**(a) Terminal Benefit Liability of Employees and Existing Pensioners:**

The actuarial valuation towards terminal benefit liability of employees and pensioners as at 31.03.2012 and projection as at 31.03.2013 and 31.03.2014 has been carried out by an Independent Actuary M/s Bhudev Chatterjee, Kolkata. As per the valuation report, the projected liability as at 31.03.2014 is estimated as **Rs.1537.62 Cr.** The Hon'ble commission in the ARR and Transmission Tariff order for the FY 2013-14 has approved **Rs.1136.46 Cr** as terminal liability up to 31.03.2012. Thus, additional fund required towards Pension and Leave Liability works out to **Rs.428.50 Cr** for the FY 2013-14. It is to bring to the kind notice of the Hon'ble Commission that the projected liability towards Gratuity has decreased as per the valuation report. Hence, in this respect no additional fund is required for the FY 2013-14. The Hon'ble Commission may treat the above terminal liability as regulatory assets and pass 1/3rd of the above liability amounting to **Rs. 142.83** Crore in the ARR for FY 2013-14 and the balance in two equal instalments in subsequent years with carrying cost. Besides, **Rs.1.30 Cr** is required towards employer's matching contribution for the employees who have joined under NPS and Non-Pensioners Categories. The item wise details are shown in **Table-2** below:

Table-2**(Rs. Crore)**

Sl. No.	Terminal Benefits	Projected actuarial liability upto 31.03.2014 (as per actuarial valuation)	Projected actuarial liability as at 31.03.2012 (Approved by OERC)	Additional fund requirement
	1	2	3	4= (2-3)
1	Pension & Pension in Payment	1412.23	985.98	426.26
2	Gratuity	51.86	79.20	0.00
3	Leave Encashment	73.53	71.29	2.25
4	Total	1537.62	1136.46	428.50
5	Less Regulatory Assets (2/3 rd of Rs.428.50 Cr)			285.67
6	Terminal liability claimed for the FY 2013-14			142.83
7	Employer's Contribution for Non-Pensioners & New Pension Scheme			1.30
	TOTAL LIABILITIES (6+7)			144.13

The copy of the actuarial valuation report is submitted at **Annexure-I.**

(b) Payment of differential pension and pensionary benefit liability:

The Hon'ble Commission had accorded in-principle approval for implementation of differential pension and pensionary benefit of ex-Govt. absorbed Engineers and provisionally allowed **Rs.3 Crore** in the ARR & Transmission Tariff for the FY 2011-12 vide order dated 18.03.2011 (Case No.145/2010). In this connection, Hon'ble Commission clarified that the pensionary liability being calculated from time to time is being allowed by the Commission in a staggered manner so that while the retired employees should not face any difficulties to get their pension (including revision), there is no substantial rise in tariff in one year. The liability towards payment of differential pension and pensionary benefits of ex-Govt. absorbed Engineers works out to the tune of **Rs.36 Crore**.

As resolved in the 47th meeting of Board of OPTCL held on 23.06.2011 [Item-41], the additional financial incidence of Rs.33 Crore (Rs. 36 Cr - Rs. 3 Cr provisionally allowed for FY 2011-12) shall be posed before OERC in ARR for approval. This was communicated by OPTCL to the Govt. of Odisha during July'2011 while indicating the modalities towards implementation of differential pension and pensionary benefits of ex-Govt. absorbed Engineers.

Further, vide order dated 23.03.2012 (Case No.92/2011), the Hon'ble Commission approved ARR & Transmission Tariff for FY 2012-13 wherein **Rs.10 Crore** was allowed provisionally for the above purpose. The Commission had directed to pursue the matter with Govt. of Odisha.

As the Hon'ble Commission has already allowed Rs.3 Crore for the FY 2011-12 and Rs.10 Crore for the FY 2012-13, the balance amount of **Rs.23 Crore** has been proposed in the ARR for FY 2013-14.

In view of above, additional fund of **Rs.23 Crore** may be provided for FY 2013-14.

Employee Cost including Terminal Benefit Liability is proposed as **Rs.626.88 Crore** as shown in the **Table-3** below:

Table-3**(Rs. Crore)**

Employee cost including Salaries, Dearness Allowance etc.	182.35
Terminal Benefits Liability of Employees & Existing Pensioners	144.13
Payment of Differential Pension and Pensionary Benefits to the absorbed Govt. Engineers in OPTCL	23.00
Less: Capitalization	8.28
Total	341.20

II. ADMINISTRATION AND GENERAL (A&G) EXPENSES: (TRF-15)

The A&G Expenses include property related expenses, communication, professional charges, conveyance and traveling, SLDC charges, license fee and material related expenses. The A&G Expenses have shown an increasing trend in recent years due to price rise and inflation and is on the higher side than the amount approved by the Hon'ble Commission. In view of the above, OPTCL proposes **Rs. 23.09 Cr** towards A&G Expenses for FY 2013-14 taking into account the annual escalation under different items. The details of proposed A&G Expenses are depicted in **TRF-15**. The component wise proposed A&G Expenses for FY 2013-14 are shown in the **Table-4** below:

Table- 4

(Rs. Crore)

Sl.No.	Particulars	FY 11-12 (Prov.)	OERC Approval (FY 12-13)	Estimation (FY 12-13)	Estimation (FY 13-14)
1	Property related expenses	1.20	21.25	1.32	1.45
2	Communication	0.96		1.02	1.12
3	Professional Charges	2.05		2.19	2.41
4	Conveyance & Traveling	4.40		4.76	5.24
5	Fees & Subscription	0.15		0.17	0.18
6	Books & Periodicals	0.03		0.03	0.04
7	Printing & Stationery	0.30		0.32	0.35
8	Meter Reading Charges	0.11		0.00	0.00
9	Advertisement	0.55		0.59	0.65
10	Entertainment	0.07		0.08	0.08
11	Watch & Ward	2.30		2.48	2.72
12	Electricity & Water Charges	1.99		1.84	2.02
13	Inspection Fees	1.45		1.60	1.75
14	Service tax Paid to service provider	1.56		1.56	1.56
15	Training	0.43		0.41	0.45
16	Office Upkeep & Maintenance	0.50		0.55	0.61
17	Provision for Wealth Tax			0.01	0.01
18	Gardening & Horticultural Expenses	0.03		0.03	0.04
19	SLDC Charges	0.70		0.70	0.70
20	Miscellaneous	0.40		0.40	0.40
21	Material related expenses (Loss of material)	0.00		0.05	0.05
22	OERC License Fee	1.00		1.25	1.25
	Total A&G Expenses	20.18		21.35	23.09

III. REPAIR AND MAINTENANCE (R & M) EXPENSES: (TRF-14)

The R&M works of OPTCL are undertaken in different streams namely O&M, Telecom, Information Technology (IT) and Civil Works. The summary of proposed R&M Expenses of **Rs. 108.91 Crore** under these four heads are furnished in the **Table-5** below:

Table-5

(Rs. Crore)

Particulars	OERC approval (FY 11-12)	OERC approval (FY 12-13)	Projection (FY 13-14)
a) O&M	75.00	95.02	83.08
b) Telecom			14.59
c) Civil Works			6.00
d) Information Technology			5.24
Total			108.91

(a) R & M Expenses relating to O & M Wing:

Currently, OPTCL owns 100 nos. grid sub-stations of different voltage classes and EHT transmission line of 11344.196 ckt. km. as shown in the **Table-6** below:

Table-6

Sub-Station and Line Details		
400/220 kV SS	3	
220/132/33 kV SS	14	
220/33 kV SS	4	
220/132 kV SS	1	
132 kV Sw.S	16	
132/33 kV SS	58	
132/33/25 kV SS	1	
132/33/11 kV SS	1	
132/11 kV SS	2	
Total No. of Sub-Stations	100	
Voltage Level	Lines (ckt. km.)	Bays
400 kV	518.234	32
220 kV	5520.214	229
132 kV	5305.748	663
33 kV		730
25 kV		2
11 kV		18
Total	11344.196	1674

There has been consistent rising trend of the loading pattern on the transmission system. The power transformers and EHT lines are now operating at such optimum loading levels that it is impossible to undertake maintenance work or attend breakdown job on those without load shedding. In addition to this, some of the EHT lines are pretty old and have outlived their useful life span. A large portion of the equipments which were imported during the inception of the old grid sub-stations are obsolete now and spares for such equipments are no longer available, making repair impossible.

Further, consistent expansion of EHT network with the addition of new lines & sub-stations due to rapid industrialization and rural electrification initiatives has resulted in higher fault levels at various EHT grid sub-stations for which some of the existing equipments like CBs, Isolators, CTs are now inadequate to handle the present system.

To operate the system effectively and to maintain uninterrupted, quality power supply in the state and to meet the performance standards set down by the Hon'ble Commission as well, it is absolutely necessary to undertake replacement of the old / obsolete equipments that have outlived their useful economic life. Also it is required to renovate and upgrade the equipments in the existing system to handle the increased load in the system.

With the above objectives, OPTCL proposes the R&M Expenses of **Rs.83.08 Crore** for FY 2013-14 under different items of O&M Wing, the details of which are shown in the **Table-7** below:

Table-7

R & M EXPENDITURE - O&M WING				
Sl. No.	Description	Unit Landing Rate (Rs.)	Qty.	Total Cost (Rs. Crore)
1	Circuit Breaker (Nos.)			
i	220kV	1502995	18	2.71
ii	132kV	632584	39	2.47
iii	33kV	178586	43	0.77
2	C.T.(Nos.)			
a)	220kV			
i	1200-600-300/1-1-1-1	403436	2	0.08
b)	132kV			
i	800-400-200/1-1-1	118658	23	0.27
ii	600-300-150/1-1-1	118658	21	0.25
iii	400-200-100/1-1-1	118658	152	1.80
c)	33kV			
i	800-400-200/1-1-1	33224	12	0.04
ii	400-200-100/1-1-1	33224	186	0.62
iii	600-300-150/1-1-1	33224	9	0.03
3	P.T. / CVT (Nos.)			

i	400kV	580104	2	0.12
ii	220kV PT	362565	11	0.40
iii	220kV CVT	279504	16	0.45
iv	132kV PT	96904	30	0.29
v	132kV CVT	164802	21	0.35
vi	33kV PT	21135	71	0.15
4	L.A. (Nos.)			
i	400kV	114801	1	0.01
ii	220kV	45545	11	0.05
iii	132kV	30635	73	0.22
iv	33kV	7551	57	0.04
5	ISOLATOR (Nos.)			
i	220 kV Single Isolator with E/S	446943	8	0.36
ii	220 kV Single Isolator W/O E/S	411346	14	0.58
iii	132 kV Single Isolator with E/S	261047	4	0.10
iv	132 kV Single Isolator W/O E/S	241270	53	1.28
v	33 kV Single Isolator with E/S	67635	12	0.08
vi	33 kV Single Isolator W/O E/S	67635	75	0.51
vii	220 kV Double Isolator with E/S	550000	3	0.17
viii	220 kV Double Isolator W/O E/S	550000	3	0.17
ix	132 kV Double Isolator with E/S	450899	32	1.44
x	132 kV Double Isolator W/O E/S	450899	12	0.54
xi	33 kV Double Isolator with E/S	148322	69	1.02
xii	33 kV Double Isolator W/O E/S	120491	18	0.22
6	Relays (Nos.)			
i	Numerical Differential with 2 nos. REF & v/f	263683	36	0.95
ii	Numerical DP	263683	32	0.84
iii	Numerical Backup	92289	94	0.87
iv	Auxiliary Relay (Three element)	3652	77	0.03
v	Master Trip Relay (Single element)	3652	114	0.04
vi	Master Trip Relay (Three element)	3652	66	0.02
vii	REF Relay	6526	43	0.03
				0.00
7	Transformer Oil (kL)	64722	230	1.49
8	Control cable (Assorted in km)			
i	Power Cable (3 ½ core, 95 mm ²)	235158	11	0.26
ii	Power Cable (3 ½ core, 25 mm ²)	94926	15	0.14
iii	3 core 2.5 mm ²	52425	28	0.15
iv	4 core 2.5 mm ²	66125	46	0.30
v	7 core 2.5mm ²	102477	34	0.35
vi	12 core 2.5 mm ²	169896	28	0.47

vii	9 core 2.5 mm2	158022	23	0.37
viii	19 core 2.5 mm2	263204	27	0.72
9	SF-6 Gas Cylinders (50 kg.) (Nos.)	34680	77	0.27
10	Insulator(Nos.)			
i	90 KN Disc (Normal)	581	7655	0.44
ii	90 KN Disc (Antifog)	883	2950	0.26
iii	120 KN Disc (Normal)	750	4260	0.32
iv	120 KN Disc (ANTIFOG)	926	500	0.05
v	90 KN LR (132 kV)	6195	780	0.48
vi	90 KN LR (220 kV)	7500	450	0.34
vii	120 KN LR (132 kV)	7791	750	0.58
viii	160 KN LR (220 kV)	8500	630	0.54
ix	160KN Disc	750	2255	0.17
11	GI Earth Wire(7/3.15)(km)	24271	321	0.78
12	Vibration damper (Nos.)			
i	For AAAC Panther	630	250	0.02
ii	For ACSR Panther	353	565	0.02
iii	For ACSR Zebra	551	517	0.03
iv	For Earth Wire	396	575	0.02
13	GI Angle (MT)			
i	45x45x5mm	55000	52.6	0.29
ii	50x50x5mm	55000	32.1	0.18
iii	50x50x6mm	55000	31.5	0.17
iv	65x65x6mm	55000	22	0.12
v	75x75x6mm	55000	12.2	0.07
vi	80x80x6mm	55000	5.5	0.03
14	Single Suspension H/W Fitting (Nos.)			
i	For ACSR Horse	3500		
ii	For ACSR Panther	1761	513	0.09
iii	For ACSR Zebra	2839	448	0.13
iv	For ACSR Moose	3781	21	0.01
v	For AAAC Panther	1761	120	0.02
vi	For AAAC Zebra	3117	50	0.02
vii	For AAAC Moose	2889	122	0.04

viii	For 7/3.15sq mm earth wire	2500	297	0.07
15	Double Suspension H/W Fitting(In Nos)			
i	For ACSR Horse			
i	For ACSR Panther	3420	331	0.11
ii	For ACSR Zebra	4087	237	0.10
iii	For ACSR Moose	4828	0	0.00
iv	For AAAC Panther	3420	30	0.01
v	For AAAC Zebra	4087	23	0.01
vi	For AAAC Moose	3954	98	0.04
16	Single Tension H/W Fitting(Nos.)			
i	For ACSR Horse	1541	40	0.01
ii	For ACSR Panther	1541	735	0.11
iii	For ACSR Zebra	2252	443	0.10
iv	For ACSR Moose	2835	10	
v	For AAAC Panther	1632	50	0.01
vi	For AAAC Zebra	2252	26	0.01
vii	For AAAC Moose	2599	45	0.01
viii	For 7/3.15sq mm earth wire	2599	345	0.09
17	Double Tension H/W Fitting (Nos.)			
i	For ACSR Horse			
ii	For ACSR Panther	3173	290	0.09
iii	For ACSR Zebra	3972	193	0.08
iv	For ACSR Moose	4397	20	0.01
v	For AAAC Panther	3200	41	0.01
vi	For AAAC Zebra	3229	20	0.01
vii	For AAAC Moose	4769	128	0.06
18	Pre-formed Armour Rod (Set)	1000	207	0.02
19	Aluminium Extension Ladder (Nos.)	20000	15	0.03
20	BATTERY (Nos.)			
i	Battery Set	1397400	4	0.56

ii	Battery charger	299640	6	0.18
21	CR Panel (Nos.)			
i	220kV(feeder)	2586791	1	0.26
ii	132kV(Transformer)	530606	2	0.11
iii	33kV(Transformer)	204211	8	0.16
22	Hydraulic Compressor Machine (Nos.)	135000	2	0.03
23	Towers (Nos.)			
i	OA	274235	2	0.05
ii	+ 3 to OA	45572	5	0.02
iii	+ 3 to OB	84838	2	0.02
iv	+ 6 to OB	141981	2	0.03
v	PC	384605	7	0.27
vi	+ 3 to PC	69550	4	0.03
vii	+ 6 to PC	145600	5	0.07
24	AMC on Energy Metering System	LS		0.63
25	Engagement of security personnel	LS		9.00
26	Repair of defective power transformers	LS		5.00
27	Misc. expenses for O&M field divisions such as painting of towers & transformers, switch yard cleaning, sanitation, transportation of transformers, replacement of tower members, AMC on A/C machines, switchyard illumination, overhauling of breakers, renovation of old Grid S/S, AMC of capacitor banks etc.	LS		20.00
28	Major renovation of Ganjam Grid S/S	LS		2.00
29	Minor Civil Works	LS		2.00
30	Safety material	LS		0.75
31	Installation of capacitor banks	LS		5.00
32	Renovation of old EHT lines including revetment, coupling, conductor & insulator replacement etc.	LS		5.87
TOTAL				83.08

(b) R & M Expenses relating to TELECOM Wing:

The AMC of RTU under ULDC project, APS package, wide band communication package, procurement of different equipments for the purpose of R&M activities, license fees & renovation of PLCC/ SCADA etc. have been envisaged as R&M expenses in order to keep in place a healthy and efficient telecommunication system. Accordingly provision of **Rs.14.59 Cr** is proposed during FY 2013-14 towards R&M expenses pertaining to Telecommunication Wing, the details of which are shown in the **Table-8** below:

Table-8**(Rs. Crore)**

R & M EXPENDITURE - TELECOM WING		
Sl.No.	ITEM	Amount
1	AMC of RTU under ULDC project	1.05
	a) Cost of AMC	0.12
	b) Cost of new feeder/ element integration	0.18
	c) Purchase of new RTU for replacement	0.75
2	AMC APS package	0.22
	a) Cost of AMC	0.12
	b) Cost of replacement/ repair of materials	0.10
3	AMC of Wideband Communication package	0.78
	a) Cost of AMC	0.65
	b) Cost of Spares (LS)	0.13
4	Procurement of Outdoor coupling equipment (CVT, Wave traps)	2.00
5	Procurement of Test Instruments	0.35
6	Procurement of battery & battery charger	0.50
7	Procurement of AC machine with Stabilizer	0.13
8	Procurement of OPGW cable with hardware fittings(10 kms)	0.30
9	Procurement of spares for PLCC, PABX, Chargers, MCD-80, NSD- 50, NSK - 5 etc.	1.00
10	Revival of carrier back up protection system (14 line in 1st phase)	2.20
11	Provision of Logic earth & surge arrestor at grid s/s(10 nos.)	0.06
12	R & M of Telecom works at Divisional levels	2.50
13	License fee for walki-talkie	0.065
14	Renovation of PLCC/SCADA due to advancement of technology	3.43
	Replacement of old analog PLCC sets by new digital PLCC sets in identified S/S	1.60
	Replacement of old RTU	0.71
	Replacement of SDH equipment	0.90
	Replacement of coaxial and other Cables (km)	0.225
	TOTAL	14.59

(c) R & M Expenses relating to Civil Works:

OPTCL proposes an expenditure of **Rs.6.00 Crore** towards civil works relating to major Repair & Maintenance of office buildings, associated colonies and grid sub-stations of during FY 2013-14.

(d) R & M Expenses relating to Information Technology (IT):

A provision of **Rs. 5.24 Cr** is made towards R&M expenses pertaining to IT wing during FY 2013-14, the details of which are shown in the **Table-9** below.

Table-9

R & M EXPENDITURE - IT WING		
Sl. No.	Item Description	Rs. Lakh
1	AC	2.29
2	PC & Multi vendor equipment	11.66
3	Laptop	0.52
4	Printers	5.59
5	Scanners	0.06
6	LCD Projectors	0.75
7	GIS	1.50
8	Digitization Drawing	3.48
9	UPS	2.59
10	ERP	68.00
11	DR Centre	53.82
12	FMS-Outsourcing	35.07
13	FMS OPTCL	33.00
14	E-Mail Services	20.00
15	SMS M/S Systems	0.50
16	OGS-WAN – I (157) FMS + Bandwidth	250.38
17	VSAT Bandwidth 9 locations	9.00
18	OPTCL Tower LAN	0.27
19	Air Conditioner	0.31
20	Wipro PC (240) + DMP	5.42
21	IT Consumables	20.00
22	Data One Connectivity	0.13
TOTAL		524.33

Taking into account the proposed expenditure to be incurred towards manpower (Employee Cost including Terminal Benefit), Repair & Spares (R&M Expenses), towards consumables, insurance and overheads (A&G Expenses), OPTCL proposes the O&M Expenses as **Rs. 473.20 Crore**.

The summary of O&M Expenses for FY 2013-14 is shown in the **Table-10** below:

Table-10

SUMMARY OF O&M EXPENSES

Particulars	Amount (Rs. Cr.)
(I) Employees Cost including Terminal Benefits	341.20
(II) A&G Cost	23.09
(III) R&M Cost	108.91
TOTAL	473.20

O & M Expenses as per CERC Norms:

CERC Regulations, 2009 relating to Inter-State Transmission O&M expenses [Regulation 19(g) of Chapter-3] deals with the norms for O&M expenses per ckt-km of transmission lines and per bay of sub-stations for the period 2009-10 to 2013-14. The CERC norms for O&M Expenditure are reproduced in the **Table-11** below :

Table-11

CERC Norms for O&M expenditure for Transmission System					
	2009-10	2010-11	2011-12	2012-13	2013-14
Norms for Sub-Station (Rs. Lakh per bay)					
765 kV	73.36	77.56	81.99	86.68	91.64
400 kV	52.40	55.40	58.57	61.92	65.46
220 kV	36.68	38.78	41.00	43.34	45.82
132 kV and below	26.20	27.70	29.28	30.96	32.73
Norms for AC and HVDC lines (Rs. Lakh per km)					
Single Circuit (Bundled conductor with four or more sub-conductors)	0.537	0.568	0.600	0.635	0.671
Single Circuit (Twin & Triple Conductor)	0.358	0.378	0.400	0.423	0.447
Single Circuit (Single Conductor)	0.179	0.189	0.200	0.212	0.224
Double Circuit (Bundled conductor with four or more sub-conductors)	0.940	0.994	1.051	1.111	1.174
Double Circuit (Twin & Triple Conductor)	0.627	0.663	0.701	0.741	0.783
Double Circuit (Single Conductor)	0.269	0.284	0.301	0.318	0.336

On the basis of the above mentioned CERC norms, the O&M Expenses of OPTCL for FY 2013-14 is **Rs. 623.51 Crore** as worked out in the **Table-12** below:

Table-12

O&M Expenses as per CERC Norms for FY 2013-14			
Segregation of Bays	No. of Bays	O&M expenses Rs. Lakh / bay	Total O&M Expenses (Rs. in Cr)
765 kV	0	91.64	0.00
400 kV	32	65.46	20.95
220 kV	229	45.82	104.93
132 kV and below	1413	32.73	462.47
TOTAL O&M EXPENSES FOR BAYS =			588.35
Segregation of EHT lines	ckt. km of line	O&M expenses Rs. Lakh / km	Total O&M Expenses (Rs. in Cr)
Single Circuit (Bundled conductor with four or more sub-conductors)	0.00	0.671	0.000
Single Circuit (Twin & Triple Conductor)	241.50	0.447	1.080
Single Circuit (Single Conductor)	3984.45	0.224	8.925
Double Circuit (Bundled conductor with four or more sub-conductors)	0.00	1.174	0.000
Double Circuit (Twin & Triple Conductor)	276.73	0.783	2.167
Double Circuit (Single Conductor)	6841.51	0.336	22.987
TOTAL O&M EXPENSES FOR LINES =			35.16
AGGREGATE O&M EXPENSES FOR BOTH LINES & BAYS =			623.51

Although the O&M Expenses as per CERC norms works out to **Rs. 623.51 Crore**, OPTCL has proposed the O&M Expenses on the lower side as **Rs.473.20 Crore** in this application as explained and summarised in **Table -10** above.

A. 2) INTEREST ON LOAN CAPITAL (TRF-3):

Interest on loan for FY 2013-14 has been projected as **Rs.121.11 Crore**. Details of interest on loan capital is shown in **TRF-3** and the abstract is presented in the **Table-13**:

Table-13

Projection for Interest on loan for FY 2013-14							(Rs. Crore)
	Loan Details	Rate of Interest	Principal CB as on 31.03.13	Loan to be received during 2013-14	Principal repayment for 2013-14	Interest payment for 2013-14	Total Payment for 2013-14
A	Govt. Loans						
	State Govt.(Cash Loan)	13.00%	2			0.26	0.26
	State Govt.(CRF)	0.00%	15				0
	Central Govt. Loan	9.00%	11.26			1.01	1.01
	GoO Bonds	13.00%	400			26.00	26
	Sub Total		428.26			27.27	27.27
B	Institutional Loans						
	Total REC Loan		162.33		10.83	19.49	30.32
	PFC Loan	11.25%	14.22		1.24	1.54	2.78
	PFC Loan (New)	12.50%	13.45		1.08	1.68	2.76
	Sub Total		190.00		13.15	22.71	35.86
C	Secured Loan						
	HUDCO	11.00%	17.95		17.95	0.70	18.65
	Oriental Bank of Commerce	11.75%	30.34		28.57	2.01	30.58
	Sub Total		48.29		46.52	2.71	49.23
D	Deposit from EHT Consumers						
	Sub Total of Infrastructure Loan		90.46	2.00	3.00		3.00
E	Loans for New Projects (PFC/REC/Commercial banks)	12.25%	351.11	543.82		54.81	54.81
F	Other Loans & Finance Charges						
	Employee Housing Loans	12.00%	0.75		0.02		0.02
	Finance Charge		0			13.61	13.61
	Sub Total		0.75		0.02	13.61	13.63
G	Grand Total		1108.87	543.82	62.69	121.11	183.80

New Projects:

OPTCL proposes to spend **Rs.639.79 Crore** during FY 2013-14 as Capital Expenditure (CAPEX) on new projects in different streams of activities like O&M, Telecom, Information Technology (IT), Transmission Project & Construction (TP & Con.) and Civil Works. The summary of proposed CAPEX under various heads are furnished in the **Table-14** below:

Table-14
Projected CAPEX for FY 2013-14

Particulars	Amount (Rs. in Cr.)
a) Telecom	48.05
b) O&M	67.96
c) Information Technology (IT)	14.51
d) TP & Con. (Excluding Deposit Works)	485.11
e) Civil Works	24.16
Total Capital Expenditure (a+b+c+d+e)	639.79

a. CAPEX FOR TELECOM RELATED PROJECTS:

In order to have a dependable, safe and effective communication system, OPTCL has implemented its own Telecommunication Network through PLCC between grid sub-stations and generating stations and Microwave & Optic Fibre communication between Sub-LDC to SLDC, Bhubaneswar. The PLCC system adopted in OPTCL is generally considered to be very much economic, reliable and dependable for voice, data and carrier back-up protection facility. Due to limitation of frequency band for PLCC equipment and because of gradual complex grid system, action is also under progress to provide SCADA interface points at all the 220kV Grid S/S of OPTCL through OPGW connectivity as per the provisions made under amended OGC Regulations, 2006 dated 29th August 2008. In the meantime, large number of industries are coming up in the state either having CGP or planning to draw power from OPTCL's network. For smooth management of power system, the industries are required to be integrated with OPTCL grid system as per the provisions of OGC Regulations by providing necessary voice and data communication to SLDC, Bhubaneswar. Further, the existing operating system is also required to be upgraded to suit to the present requirements because of large number of upcoming grid sub-stations. Keeping in view all such points, constant endeavour has been made to renovate and upgrade the existing telecommunication system under ULDC expansion scheme by way of integration of 30 nos. existing grid sub-

stations with the present ULDC system as well as software and hardware upgradation of main control centre at SLDC and establishment of back-up control centre at Meramundali. The work is being executed through consultancy of PGCIL. Looking to the above aspects, the CAPEX for the FY 2013-14 in respect of Telecommunication Wing is detailed as follows:

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

30 grid sub-stations have been identified by OPTCL for integration which is likely to be completed during FY 2013-14 with an estimated cost of **Rs.36 Crore**. The sub-stations covered under different Sub-LDCs are mentioned below:

- A. Bhubaneswar Sub-LDC:** Balugaon, Jagatsinghpur, Nimapara, Salepur & Phulnakhara
- B. Meramundali Sub-LDC:** Bolani, Chandikhole, Jajpur Town, Jaleswar, Kalarangi, Nuapatna, Pattamundai, Polasponga & Soro
- C. Budhipadar Sub-LDC:** Brajarajnaragar, Chhend, Jharsuguda, Patnagarha, Rairakhol, Sonapur & Sundargarh
- D. Jayanagar Sub-LDC:** Digapahandi, Junagarh, Khariar, Mohana, Parlakhemundi, Phulabani, Sainatala, Tentulikhunti & Balimela 220 kV Grid S/S

Apart from the above, integration of 5 nos. of grid sub-stations namely, (1) Badagada (2) Karanjia (3) Basta (4) Anandpur (5) Barapali shall also be taken up in the above project. The Board of OPTCL in its 34th meeting has accorded administrative approval for this project. Hon'ble OERC has also approved the investment proposal.

The initial advance of **Rs. 7.172 Crore** has already been released by OPTCL. All the tendering activities are completed & contract agreement has been made with M/s Chemtrols India Ltd. Survey of all 35 S/S completed. Vendor surveyed the existing database. They are under process of developing software for existing and upcoming S/S of OPTCL and private industries. In addition to release of initial advance, there is requirement of fund to the tune of **Rs. 2.50 Crore** during the FY 2012-13 for which provision has already been made. An amount of **Rs. 12.30 Crore** shall be required towards the project against FAT and operational acceptance during the FY 2013-14. As PGCIL has not raised the invoices towards delivery of materials and the materials are yet to be delivered, provision of **Rs.2.50 Crore** has been made. Hence, in FY 2013-14, there is requirement of funds to the tune of **Rs. 14.80 Crore (Rs.12.30 Cr + Rs. 2.50 Cr)** for integration of RTUs under ULDC scheme.

2. Provision of SCADA interface point at 220 kV Grid S/S through OPGW:

Hon'ble OERC has suggested to provide the SCADA interface point at all 220 kV Grid S/S under OPTCL through Optic Fibre link in all 220 kV line sections. Hence, the following line sections are to be provided with OPGW connectivity to have broadband communication network. This project is likely to be completed within a time span of 3 years starting March 2011. The circuit length of the 220kV line sections are computed to be 1324 km. The details of line sections are given as hereunder:

i)	Balasore - Bhadrak	78 km
ii)	Duburi (New) - Bhadrak	68 km
iii)	Paradeep – Duburi (New)	114 km
iv)	TTPS – Meramundali	11 km
v)	Joda – Polaspanga	51 km
vi)	Polaspanga - Keonjhar	45 km
vii)	Keonjhar – TTPS	95 km
viii)	Rengali PH – Kaniha	30 km
ix)	Bolangir (New) – Burla (New)	120 km
x)	Burla PH – Burla (New)	15 km
xi)	Burla (New) – Chiplima	17 km
xii)	Burla (New)– Budhipadar via Lapanga	62 km
xiii)	Budhipadar – IB TPS	26 km
xiv)	Bolangir (New)-Kesinga	72 km
xv)	Kesinga -Therubali	123 km
xvi)	Jayanagar – Machhakund	43 km
xvii)	Jayanagar – Upper Kolab	6 km
xviii)	Jayanagar – Balimela PH	93 km
xix)	Therubali – Indravati	91 km
xx)	Bhanjanagar – Nayagarh	69 km
xxi)	Nayagarh – Mendhasal	81 km
xxii)	Bidanasi – Chandaka	14 km
	TOTAL	1324 km

The progress of the above work is as mentioned below:

Contract has already been awarded to M/s LS Cable & System Ltd. Survey of all line sections completed except Jayanagar-Balimela & Jayanagar-Machhkund feeder which is not possible due to maoist problem. OPTCL has reported PGCIL to survey the Jayanagar-Balimela 220kV line and OPTCL shall extend necessary cooperation for the same. Drum schedule and bill of materials have already been prepared by the vendor.

As it has been decided by OPTCL management to execute the above work through PGCIL, the estimate as submitted by PGCIL is as follows:

1) Cost of the Project	Rs. 59.59 Crore
2) Overhead Charges @ 12%	Rs. 7.15 Crore
3) Service Tax on Overhead Charges @ 10.31%	<u>Rs. 0.74 Crore</u>
- Total	Rs. 67.48 Crore

The total cost of the project is likely to be spent in 3 years starting FY 2010-11. For FY 2013-14 a provision of funds to the tune of **Rs.33.25 Crore** has been made for SCADA interface point at 220 kV Grid S/S through OPGW.

Table-15

CAPEX for Telecom Project in FY 2013-14

ITEM	Amount (Rs. Crore)
(a) Integration of 35 nos. RTU	14.80
(b) Provision of SCADA inter face at 220KV & above S/S	33.25
TOTAL	48.05

b. CAPEX FOR O&M RELATED PROJECTS:

An amount of **Rs.67.96 Crore** has been proposed for the FY 2013-14 under CAPEX to meet the future load growth basically by way of transformer capacity augmentation / sub-station capacity enhancement by installing third transformers in the existing grid sub-stations of OPTCL, conductor upgradation with HTLS, Conversion of S/C lines in D/C towers to D/C lines. The details of item wise CAPEX for O&M related project are shown in the **Table-16** below.

Table-16

CAPEX for O&M Projects in FY 2013-14				
Sl. No.	Line/Equipment details	Unit Rate (Rs. Lakh)	Quantity	Total Cost (Rs. Cr)
1	PROCUREMENT OF TRANSFORMERS WITH COST OF ERECTION			
(i)	Procurement of 160 MVA, 220/132kV transformers	715.00	1	7.15
(ii)	Procurement of 20 MVA, 132/33kV transformers	185.90	16	29.74
(iii)	Erection cost of available transformers	LS		2.20
2	CONDUCTOR UP-GRADATION WITH HTLS			
(i)	132kV Chandaka - Mancheswar Ckt. - II (5.88 Rkm)	LS		2.34
(ii)	132kV Chandaka - Mancheswar ckt. - I (5.5 Rkm)	LS		2.19
(iii)	132kV Chandaka - Ranasinghpur (24.25 Rkm)	LS		9.65
3	CONVERSION OF S/C LINES IN D/C TOWERS TO D/C LINES			
(i)	132kV Akhusingh - Paralakhemundi (76.9 Rkm)	LS		5.39
(ii)	132kV Jajpur Road - Anandpur (30 Rkm)	LS		2.19
(iii)	132kV New Bolangir - Patnagarh (40.2 Rkm)	LS		3.12
(iv)	132kV New Bolangir - Sonapur (53.845 Rkm)	LS		4.00
TOTAL				67.96

c. CAPEX FOR INFORMATION TECHNOLOGY (IT) RELATED PROJECTS:

Provision for an amount of **Rs. 14.51 Crore** is made for FY 2013-14 towards CAPEX for infrastructure development of IT and automation related fields etc. as given in the **Table-17** below:

Table-17

CAPEX for IT Projects in FY 2013-14		
Sl. No.	CAPEX Item Description	Rs. Crore
1	AC	0.050
2	Furnitures	0.354
3	Data Center	0.000
4	PC	0.924
5	Laptop	0.195
6	Workstations	0.088
7	Tablets	0.010
8	Printers	0.697
9	Scanners	0.049

10	LCD Projectors	0.015
11	GIS	1.000
12	UPS	0.770
13	ERP	1.980
14	DR Center	5.382
15	DLLD	0.300
16	DW & BI	2.100
17	OGS-WAN - III New S/s	0.039
18	PH & CGP	0.433
19	OPTCL HQ LAN	0.125
	TOTAL	14.512

d. CAPEX FOR TRANSMISSION PROJECT & CONSTRUCTION WING: (TRF-2)

It has been planned to spend an amount of **Rs. 522.73 Crore** on transmission related infrastructure during FY 2013-14 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-18** below.

Table-18

CAPEX for TP & Construction Projects in FY 2013-14

(Rs. Crore)

Sl. No	Loan/ Scheme/ Contract-wise Capital Works	Expenditure During FY 2012-13			Projected Expenditure during FY 2013-14
		Actuals for 1st Six Months	Projection for balance Six Months	Total	
(A) ONGOING SCHEMES					
1	2	3	4	5=3+4	6
1	400/220kV S/S at New Duburi	0.35	0.50	0.85	-
2	132/33kV S/S at Anandpur with associated line (New)	0.37	0.10	0.47	-
3	2x12.5 MVA, 132/33 kV S/S at Nuapada with associated line	3.23	2.77	6.00	17.16
4	2x12.5 MVA, 132/33 kV S/S at Dabugaon with associated line	2.31	3.69	6.00	11.11
5	2x12.5 MVA, 132/33 kV S/S at Padampur with associated line	2.56	2.44	5.00	14.55
6	2x12.5 MVA, 132/33 kV S/S at Kuchinda with associated line	1.91	3.09	5.00	5.80
7	2x12.5 MVA, 132/33 kV S/S at Bhawanipatna with associated line	1.89	1.50	3.39	-

8	2x12.5 MVA, 132/33 kV S/S at Boudh with associated line	3.10	6.00	9.10	24.43
9	2x12.5 MVA, 132/33 kV S/S at Purushottampur with associated line	1.12	3.27	4.39	-
10	2x12.5 MVA, 132/33 kV S/S at Chandpur with associated line	1.41	2.91	4.32	-
11	2x12.5 MVA, 132/33 kV S/S at Banki with associated line	1.27	3.47	4.74	-
12	2x12.5 MVA, 132/33 kV S/S at Kalunga with associated line	1.49	4.00	5.49	5.50
13	2x40 MVA, 220/33 kV S/S at Gopinathpur (Keonjhar) with associated line	1.14	9.22	10.36	5.21
14	2x100 MVA, 220/132/33 kV S/S at Kuanrunda with LILO arrangement from existing 220 kV Budhipadar-Tarkera D/C line	3.60	15.00	18.60	0.16
15	2x160MVA and 2x20MVA 220/132/33 kV S/S at Lapanga with associated line	5.97	5.17	11.14	15.88
16	2x40 MVA, 220/33 kV S/S at Bonai with associated line	-	5.50	5.50	10.65
17	2x20 MVA, 132/33 kV S/S at Barbil with associated line	-	3.00	3.00	-
18	400kV Ib-Meramundali D/C line	-	0.05	0.05	-
19	400kV Meramundali-Duburi D/C line	-	0.50	0.50	-
20	220 kV Padmanvpur-Balasore line	0.03	-	0.03	-
21	220kV Mendhasal-Bidanasi line	0.65	-	0.65	-
22	220kV Duburi old-Duburi new D/C line	0.35	-	0.35	-
23	220kV Bidanasi-Cuttack D/C line	2.23	2.75	4.98	8.07
24	220kV Bolangir-Kesinga D/C line	-	6.00	6.00	51.26
25	132kV Jagatsinghpur-Paradeep line	2.02	2.50	4.52	4.47
26	2nd Ckt. from Loc. No. 116 of 132 kV Chandaka- Nimapada S/C line to Nimapada grid with one no 132 kV bay extn.	0.08	0.30	0.38	-
27	Conversion of 132/11 kV Grid S/S to 2*40 MVA, 132/33 kV S/S at Sarasamal (Jharsuguda)	-	2.00	2.00	6.00
28	2x12.5 MVA, 132/33 kV S/S at Udala with LILO arrangement of Balasore -Baripada line	-	4.00	4.00	12.00
29	132 kV Salipur - Kendrapara S/C line	-	7.90	7.90	4.36
30	2x100 MVA, 220/132 kV grid S/S at Cuttack with 2 nos. 220 kV feeder bay extn. at Bidanasi grid with linking arrangement at both ends	1.95	14.57	16.52	12.75

31	2x100MVA, 220/132 kV S/S at Kesinga with 220kV D/C line from Bolangir to Kesinga and one no. 220kV Bay extension at Bolangir	-	13.83	13.83	-
32	2x40MVA, 132/33kV S/S at Khajuriakata near Hindol Road with associated line	1.67	3.00	4.67	13.01
33	132kV LILO arrangement of 132kV S/C line from Meramundali to Arati Steel to 132/33kV S/S Nuapatna along with one no. of feeder bay extension at Nuapatna	-	2.00	2.00	2.00
34	2x20 MVA ,132/33 kV S/S at Konark with associated lines & 132kV feeder bay extension at Nimapara	1.91	13.65	15.56	3.92
35	Renovaion of existing 2x12.5 MVA, 132/33 kV S/S at Ganjam	-	2.90	2.90	-
36	2x160MVA, 220/132kV S/S at existing 400 kV S/S Mendhasal	-	9.47	9.47	3.88
37	2nos. 220 kV feeders from 220/132/33 kV S/S of OPTCL at Jayanagar to 400/220 kV S/S of PGCIL at Jayanagar with 2 nos. of 220kV bay extension at each end	-	4.00	4.00	10.29
TOTAL (A)		42.61	161.05	203.66	242.46
(B) PROPOSED SCHEMES					
1	2x20 MVA, 132/33 kV S/S at Olaver and 2 nos. 132 kV feeder bay extn. at Pattamundai with 132 kV DC line from Pattamkundai to Olaver	-	-	-	10.00
2	2x40 MVA 132/33 kV S/S at Marshaghai (Luna) by making LILO arrangement from one ckt. of existing 132 kV Kendrapara - Paradeep D/C line	0.02	-	0.02	3.00
3	2x100 MVA, 220/132/33 kV S/S at Dhamara with connectivity from Bhadrak S/S	-	-	-	15.00
4	2x160MVA ,220/132 kV and 2x20MVA 132/33 kV S/S at Karadagadia with associated line	0.16	-	0.16	20.00
5	2x315MVA, 400kV S/S at Lapanga with LILO of one circuit of 400kV Bisra-Raipur line and both ckts of IB - Meramundali 400kV line at Lapanga	-	6.50	6.50	25.00
6	2x100MVA & 2x40MVA , 220/132/33 kV S/S at Puri with associated line	-	-	-	12.00

7	2x100MVA , 220/132/33 kV S/S at Pratapsasan near Balakati with associated 220 kV D/C LILO of proposed 220 kV Cuttack-Jatani line.132 kV D/C line from Pratap Sasan to Phulnakhara with 2 nos. bay at Phulnakhara	-	-	-	10.00
8	132kV D/C line from Baripada PGCIL (Kuchei) S/S to Jaleswar S/S with 2 nos. 132kV bay extension each at Baripada PGCIL (Kuchei) & Jaleswar	-	-	-	2.00
9	220/132/33 kV S/S at Lahanda near Joda with 132 kV D/C line from Lahanda to Barbil and two nos. 132kV feeder bay extension at Barbil	-	-	-	0.50
10	2x40MVA , 132/33 kV S/S at Baliguda with 132 kV S/C line from Phulbani to Baliguda and one no. 132kV feeder bay extension at Phulbani	-	-	-	8.00
11	2x20 MVA, 220/33 kV S/S at Narsinghpur with LILO arrangement of 1 ckt. of existing 220 kV Bhanjanagar-Meramundali D/C line	-	-	-	8.00
12	one no. 220kV feeder from proposed 220/132kV S/S of OPTCL at Cuttack to proposed 400/220 kV S/S at Uttara (Jatni) with two nos. 220kV feeder bay extension at each end	-	-	-	-
13	132kV S/C line to 132kV D/C line from PGCIL S/S Kuchei to 132/33 kV S/S Baripada	-	-	-	1.50
14	2X315MVA, 400/220/33 kV , 2x40MVA , 220/33 kV S/S at Khuntini with associated line	-	0.35	0.35	0.15
15	1x315MVA , 400/220kV , 1X20MVA , 220/33 kV S/S at Nisa near Angul with 400kV D/C line by LILO of 400kV IB-Meramundali line	-	0.35	0.35	0.20
16	400 kV S/S at Paradeep	-	0.35	0.35	0.20
17	400 kV S/S at Kuarnmunda	-	0.35	0.35	0.20
18	400 kV S/S at Joda	-	0.35	0.35	0.20
19	400 kV D/C line from Paradeep to Uttara	-	0.35	0.35	0.20

20	2x40MVA, 220/33 kV S/S at Chhendipada with 220 kV D/C line on Multi Circuit tower from proposed NISA S/S to Chhendipada	-	-	-	-
21	2x12.5 MVA, 132/33 kV S/S at Bangiriposi with LILO of 1 ckt of Kuchei-Rairangpur line	0.25	0.50	0.75	6.00
22	2x12.5 MVA, 132/33 kV S/S at Potangi with S/C line on D/C tower for Sunabeda	-	0.40	0.40	6.00
23	2x12.5 MVA, 132/33 kV S/S at Podagada with LILO of Rayagada-Jeypore line	-	0.20	0.20	10.00
24	2x20 MVA, 220/33 kV S/S at Malkanagiri with LILO of Balimela-Jayanagar line	-	0.50	0.50	10.00
25	2x12.5 MVA, 132/33 kV S/S at Umarkote with S/C line on D/C tower from Dabugaon to Umarkote	-	0.60	0.60	5.00
26	2x12.5 MVA, 220/33 kV S/S at Kasipur with LILO of one ckt. of Indravati-Therubali 220 kV D/C line	-	-	-	3.50
27	2x20 MVA, 220/33 kV S/S at Jaypatna with associated line	-	0.05	0.05	4.00
28	132 kV D/C line from Junagarh to Umerkote	-	0.15	0.15	-
29	2x12.5 MVA, 132/33 kV S/S at Kantabanji with S/C line on D/C tower from Khariar to Kantabanji	-	2.50	2.50	10.00
30	2x20 MVA, 132/33 kV S/S at Champua with LILO arrangement of existing Palaspanga- Rairangpur to Champua	-	0.20	0.20	5.00
31	2x20 MVA, 132/33 kV S/S at Ghatagaon in Keonjhar district with associated 132 kV S/C line on D/C tower from 132/33 kV S/S Anandpur to proposed S/S at Ghatagaon and one no. 132 kV bay extension at Anandapur S/S	-	0.40	0.40	8.50

32	132 kV D/C line from proposed 220/132/33 kV S/S at Dhamara to proposed 132/33 kV S/S at Olavar & rearrangement with proposed 132 kV D/C line from Pattamundai to Olavar to make 132 kV S/C line from Dhamara to Pattamundai & 132 kV S/C line from Olavar to Pattamundai	0.11	-	0.11	5.00
33	2X40 MVA, 132/33 kV S/S at CDA Cuttack with associated LILO line	-	0.15	0.15	4.00
34	2X20 MVA, 132/33 kV S/S at R.Udayagiri with 132 kV line from Mohana with 132kV bay extension at Mohana	-	0.15	0.15	5.00
35	2X20 MVA, 132/33 kV S/S at Muniguda with 132kV line from Vedanta Lanjigarh an 132 kV bay extension at Lanjigarh	-	2.00	2.00	10.00
36	2X20 MVA, 132/33kV S/S at Nandapur with 132kV line from Patangi with 132 kV bay extension at Patangi	-	-	-	-
37	2x20 MVA, 132/33 kV S/S at Satasankha in Puri district with associated 132 kV D/C line from proposed 220/132 kV Puri S/S to proposed 132/33 kV S/S at Satasankha	-	0.15	0.15	3.00
38	2x20 MVA, 132/33 kV S/S at Bhograin in Balasore district with associated 132 kV LILO line from one ckt. of proposed 132 kV Kuchei (PGCIL) - Jaleswar D/C line	-	0.10	0.10	10.00
39	220/33 kV, 2x20 MVA S/S at Deogarh with associated LILO line from LOC No. 330 of 220 kV Rengali-Tarekera D/C line	-	0.05	0.05	7.00
40	132/33 kV, 2x20 MVA S/S at Maneswar with associated LILO line from 132 kV Sambalpur - Rairakhol S/C line	-	0.10	0.10	5.00
41	Conversion of 132 kV switching station at Somanthpur (Balasore) to 2x20 MVA, 132/33 kV S/S	-	0.50	0.50	3.40
42	Conversion of existing 132 kV S/C line from Balasore to Somanthpur D/C line by stringing 2nd ckt. with one no. 132 kV bay extension at both ends	-	0.45	0.45	3.50

43	Renovation of existing 132/33 kV S/S at Ganjam (construction of 2x12.5 MVA, 132/33 kV S/S)	-	0.30	0.30	2.60
TOTAL: (B)=		0.54	18.05	18.59	242.65
TOTAL: (A+B) =		43.15	179.10	222.25	485.11
(C) DEPOSIT WORKS					
1	220 kV D/C line from Budhipadar to Basundhara MCL	0.82	0.10	0.92	-
2	Rly. traction line from Jagatsingpur to Gorakhnath	0.14	-	0.14	-
3	Chandaka-Nimapara cabling (IDCO)	1.26	6.5	7.76	5.95
4	Tomka Railway line from B.C. Mohanty & Sons Ltd.	0.51	-	0.51	-
5	132 kV LILO from Khurda-Puri for power supply to Samuka Beach near Puri S/S	0.64	5.01	5.65	6.84
6	132kV S/S at IIT, Argul	1.76	5.23	6.99	1.83
7	One no.220 kV bay at Paradeep S/S for IOCL along with 220 kV transmission line from Paradeep to IOCL	2.23	10.10	12.33	-
8	Diversion of Paradeep-Haridaspur line	0.05	-	0.05	-
9	132/33 kV S/S at Mania (Tangi) for IDCO and associated 132 kV LILO line from 132 kV ICCL-Salipur LILO at OCL to proposed 132/33 kV S/S at Mania (Tangi)	-	0.02	0.02	8.00
10	2x40 MVA, 220/33 kV Gas Insulated S/S at infocity-II and associated 220 kV LILO line from one ckt. of 220 kV Narendrapur -Mendhasal D/C line	-	0.05	0.05	15.00
TOTAL: (C)=		7.41	27.01	34.42	37.62
GRAND TOTAL: (A+B)+C=		50.56	206.11	256.67	522.73

(e) CAPEX FOR CIVIL WORKS:

OPTCL proposes CAPEX of **Rs. 24.16 Crore** relating to Civil Works during FY 2013-14 for ongoing as well as new projects in its two Divisions i.e. Bhubaneswar and Burla. Rs.16.25 Crore and Rs.7.91 Crore have been proposed towards CAPEX for Bhubaneswar Division & Burla Division respectively.

A. 3) DEPRECIATION: (TRF-23)

As per Regulation 17 (Chapter-III) of CERC Regulations, 2009, depreciation shall be computed in the following manner, namely:

- (1) The value base for the purpose of depreciation **shall be the capital cost of the asset admitted by** the Commission.
- (2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.
- (3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.
- (4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-III** to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

- (5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation including Advance against Depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.
- (6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on *pro rata* basis.

The book value of the assets for FY 2013-14 is estimated as **Rs. 3345.69 Crore** (Rs.2929.12 Cr. as on 01.04.12+Rs.416.57 Cr. projected addition during FY 2013-14). The Depreciation is estimated as **Rs.172.85 Crore** as per CERC Regulations, 2009 & **Rs. 104.79 Crore** as per pre-92 rate for FY 2013-14. The detailed Statement of Fixed Assets and block-wise computation of depreciation is shown in **Table-19** below:

Table-19

Block-wise computation of Depreciation					(Rs. Crore)	
Particulars	Depreciation Rate prescribed by CERC Regln. 2009	Depreciation @ Pre-92 Rate as per GoI Notification	Gross Block (01.04.12) (Prov.)	Gross Block (01-04-13) (Projected)	Deprcn. for FY 13-14 as per CERC Regln.	Deprcn. for FY 13-14 @Pre-92 Rate
Land and Rights	0.00%	0.00%	36.48	41.67	0	0.00
Buildings	3.34%	1.80%	78.64	89.82	3.00	1.62
Plant & Machinery (Other Civil works)	3.34%	1.80%	4.79	5.47	0.18	0.10
Plant & Machinery	5.28%	3.80%	1387.20	1584.48	83.66	60.21
Plant & Machinery (Lines, Cables & Network Assets)	5.28%	2.57%	1405.92	1605.87	84.79	41.27
Vehicles	9.50%	12.86%	1.50	1.71	0.16	0.22
Furniture, Fixture	6.33%	4.55%	2.57	2.94	0.19	0.13
Office Equipment	6.33%	9.00%	12.02	13.73	0.87	1.24
TOTAL			2929.12	3345.69	172.85	104.79

In view of the above, OPTCL prays the Hon'ble Commission to allow **Rs. 172.85 Crore** towards depreciation in the ARR for FY 2013-14 in order to enable OPTCL to repay the loan availed for CAPEX in time.

The detailed computation of depreciation is shown in **TRF-23**.

A. 4) SPECIAL APPROPRIATION:

The Hon'ble Commission had allowed Special Appropriation of Rs.52.04 Crore in the tariff order for FY 2012-13 to meet Debt Service Obligation since depreciation was allowed based on the pre-92 rate. For FY 2013-14, OPTCL has projected **Rs.172.85 Crore** towards depreciation considering CERC Regulations, 2009 which will take care of the principal repayment obligation of OPTCL.

A. 5) RETURN ON EQUITY: (TRF-12)

At the time of de-merger of GRIDCO effective from 01.04.2005, the equity share capital of OPTCL was stated at Rs.60.07 Crore, leaving the balance equity share capital with GRIDCO. Further, OPTCL has received Rs.143.00 Crore (Rs. 23.05 Cr. during FY 2008-09 + Rs. 5.00 Cr. during FY 2009-10 + Rs. 71.95 Cr. during FY 2010-11 + Rs. 43.00 Crore during FY 2011-12) from the State Govt. as equity contribution for setting up transmission projects in remote areas. Hence, the original equity investment as well as the additional investment made in OPTCL out of the business cash flow works out to **Rs. 253.07 Crore** (Rs.60.07 Cr + Rs.143.00 Cr received upto FY 2011-12 + Rs.50.00 Cr during FY 12-13), the details of which are shown in **TRF-12**.

OPTCL proposes Return on Equity (RoE) of **Rs. 49.04 Crore** during FY 2013-14 @ 19.38% post tax basis as per clause (3) of Regulation 15 of CERC regulations, 2009 on the original equity investment as well as additional investment made in the OPTCL out of the business cash flow i.e. on Rs.253.07 Crore.

Further, in view of the emerging scenario in transmission investment, RoE should be allowed for supporting counterpart funding of the equity component for future projects and expansion plans.

A. 6) INTEREST ON WORKING CAPITAL:

As per norms of the CERC Regulations, 2009 for calculation of Interest on Working Capital, the Working Capital is estimated as Rs. 251.69 Crore. The interest on working capital is proposed as **Rs. 31.46 Crore**, the details are given in **Table-20** below.

Table-20

Calculation of Interest on Working Capital	
Parameters	Amount (Rs.Cr.)
(I) Receivables equivalent to two months of fixed cost	141.28
(ii) Maintenance Spares @ 15% of O&M expenses	70.98
(iii) Operation & Maintenance expenses for one month	39.43
Total Working Capital	251.69
Interest on Working Capital @ 12.5 % per annum	31.46

TRANSMISSION COST

By considering the proposed cost / expenses under different heads, the Transmission Cost of OPTCL for FY 2013-14 is worked out as **Rs. 847.67 Crore**. Details are shown in the **Table- 21** below:

Table-21

TRANSMISSION COST FOR FY 2013-14	
Particulars	Amount Rs. in Cr.
Employee Cost including Terminal Benefits	341.20
R&M Cost	108.91
A&G Cost	23.09
Sub-Total O&M Cost	473.21
Interest on Loan Capital	121.11
Depreciation	172.85
Special Appropriation	0.00
Return on Equity	49.04
Interest on Working Capital	31.46
Total	847.67

B) ADDITIONAL EXPENSES:

B.1) CONTINGENCY RESERVE: (TRF-22)

The requirement of Contingency Reserve in a natural calamity prone State like Odisha need not be over emphasized. Investment towards Contingency Reserve relates to maintaining an emergency fund to meet expenses towards unforeseen calamities. Contingency Reserve is being kept in a separate Reserve Fund and invested in the specified securities.

For FY 2013-14 the provision for Contingency Reserve has been projected as **Rs.16.73 Crore**. The details are shown in **TRF-22**.

B. 2) GRID CO-ORDINATION COMMITTEE EXPENSES:

As per provisions under Chapter 11 of Orissa Grid Code, OPTCL formed Grid Coordination Committee (GCC) under OPTCL. **Rs. 0.30 Crore** has been projected as Annual GCC Expenses for FY 2013-14 in line with the said provisions.

B. 3) INCENTIVE FOR SYSTEM AVAILABILITY:

The Regulation 25 to 29 under Chapter- 4 of CERC Regulations, 2009 specify the “Norms of Operation” applicable for generating stations (thermal and hydro) and transmission system for recovery of capacity charge, energy charge, transmission charge and incentive. The Regulation 25 (1) is reproduced below.

*“25. (1) Recovery of capacity charge, energy charge, transmission charge and **incentive by the generating company and the transmission licensee** shall be based on the achievement of the operational norms specified in this Chapter.”*

Regulation 28 specifies the Normative Annual Transmission System Availability Factor (NATAF) for the Transmission System for the purpose of recovery of transmission charge and incentive by the Transmission Licensee. The Regulation 28 is reproduced below.

“28. Normative Annual Transmission System Availability Factor (NATAF) shall be as under:

- (1) AC system: 98%*
- (2) HVDC bi-pole links: 92%*
- (3) HVDC back-to-back Stations: 95%”*

The system availability of its transmission network of OPTCL for FY 2011-12 has been worked out as **99.84%** and it has been duly certified by SLDC. The availability has been computed following the procedure laid down in Appendix -IV of CERC Regulations, 2009 and filed as **Annexure-II**. As submitted above, OPTCL is entitled to receive incentive for making available the Transmission System more than 98% for the year 2011-12.

In view of the above, OPTCL humbly submits that the incentive due to OPTCL for the year 2011-12 may be allowed in the ARR and Transmission Tariff order for FY 2013-2014. The incentive is to be paid by the six long-term customers of OPTCL (Four DISCOMs, NALCO and IMFA) as per the calculation worked out in the **Table-22** below.

Table-22**CALCULATION OF INCENTIVE CLAIMED BY OPTCL**

Name of the long-term customer	Energy Wheeled by OPTCL During 2011-12 (MU)	Transmission Charge @ 25 P/U during 2011-12 (Rs. in Crore)	Transmission System Availability during 2011-12 for calculation of incentive	Transmission System Availability above 98%	Incentive claimed by OPTCL for 2011-12 (Rs. in Crore)
(1)	(2)	(3)	(4)	(5)=(4)- 98%	(6)=(3) x(5)
CESU	7229.90	180.75	99.84%	1.84%	3.33
NESCO	5026.35	125.66	99.84%	1.84%	2.31
WESCO	6177.24	154.43	99.84%	1.84%	2.84
SOUTHCO	2823.96	70.60	99.84%	1.84%	1.30
NALCO	385.39	9.63	99.84%	1.84%	0.18
IMFA	194.53	4.86	99.84%	1.84%	0.09
Total Incentive Claimed (Rs. in Crore)					10.05

It is further submitted that the incentive approved by the Hon'ble Commission would be utilised for enhancing motivation of employees of OPTCL in the manner as would be decided by OPTCL management.

OTHER INCOME AND COST / MISCELLANEOUS RECEIPT:

During 1st six months of FY 2012-13, Miscellaneous Receipt of OPTCL from different sources is about **Rs. 4.78 Crore**, the details are given in the **Table-23** below:

Table-23**Miscellaneous Receipt during 1st six months of FY 2012-13**

Source	Amount Received (Rs. Crore)
Inter-State Wheeling	0.00
Intra-state Short Term Open Access	1.11
Inter-state Short Term Open Access	0.16
STU charges received from Energy Exchange	0.55
Supervision Charge	2.96
TOTAL	4.78

Current status on revenue earnings from Inter-State Wheeling:

As per direction of Hon'ble CERC in Suo-Motu Petition No. 15 of 2012, OPTCL has filed its application for determination of Point of Connection (PoC) transmission charges for a number of natural and deemed ISTS lines for FY 2012-13. The bills on inter-state customers would be raised only after the determination of the transmission charges by CERC.

Further, some State entities including GRIDCO have filed cases in their High Courts challenging the modality of determination of PoC transmission charges which are now taken up by Delhi High Court for dealing all similar cases. OPTCL has not raised any invoices pertaining to wheeling charges upon inter-state customers since April'2012 due to PoC regime effective from 01.07.2011. In view of the position explained, revenue from inter-state wheeling during FY 2013-14 cannot be correctly assessed.

Current status on revenue earnings from Supervision Charge:

Compared to previous years, the earning from Supervision Charge during 1st six months of FY 2012-13 has drastically reduced. The number of applicant industries are very less for which revenue from Supervision Charge during the balance period of FY 2012-13 would not be appreciable.

For the above reasons, revenue generation from other sources is not certain. Hence, in line with the trend of revenue earning during FY 2012-13, OPTCL expects the Miscellaneous Receipt of **Rs. 12.00 Crore** during FY 2013-14.

The summary of Annual Revenue Requirement of OPTCL for FY 2013-14 is shown in the **Table-24** below adding all the projected expenditures as explained in forgoing paragraphs:

SUMMARY OF ANNUAL REVENUE REQUIREMENT OF OPTCL FOR FY 2013-14

Table-24 (Rs. Crore)

ITEMS	Proposal for OPTCL 2013-14	
A. FIXED COST		
1) O&M Expenses		473.21
(i) Employees Cost including Terminal Benefits	341.20	
(ii) R&M Cost	108.91	
(iii) A&G Cost	23.09	
2) Interest on Loan Capital		121.11
3) Depreciation		172.85
4) Special Appropriation		0
5) Return on Equity		49.04
6) Interest on Working Capital		31.46
Sub-Total (A)		847.67
B. Additional Expenses		27.08
1) Contingency Reserve	16.73	
2) GCC Expense	0.30	
3) Incentive for system availability	10.05	
Total Trans. Cost (A+B)		874.75
C. Less Misc. Receipts		12.00
D. ARR to be recovered from LTOA Customers i.e. OPTCL's Annual Revenue Requirement		862.75

TRANSMISSION LOSS:

The transmission loss is dependent on the location of generation sources, system configuration and power flow requirements at different load centres. In view of the increasing demand for power at an accelerated pace due to ongoing industrialization and implementation of central & state sponsored schemes like RGGVY, BGJY etc. in Odisha, there will be increased flow of power in the OPTCL transmission network contributing to increased transmission loss.

OPTCL has been able to reduce the transmission loss year over year by commissioning a number of new transmission projects and innovative schemes under Master Maintenance Plan during last few years. The actual transmission loss in the OPTCL's transmission system from April'12 to September'12 is **3.93%** against Commission's approval of 3.8% for the current FY 2012-13. OPTCL expects the loss level to remain around 3.9% in the current year. OPTCL proposes **3.8%** transmission loss during FY 2013-14 i.e. 0.1% reduction from the current level of loss.

ESTIMATION OF REVENUE RECEIPT AND DEFICIT OF ARR AT THE EXISTING TRANSMISSION CHARGE @ 25P/U

During FY 2013-14, OPTCL will earn revenue from the LTOA Customers in the following manner:

- (i) By charging the rate applicable on DISCOMs for wheeling of **25125 MU** from Generating Stations to the supply points of DISCOMs.
- (ii) By charging the rate applicable on CGPs like IMFA & NALCO for supply of **100 MU** Emergency Power & Back-up Power to their CGPs and load centres located elsewhere in Odisha.
- (iii) By charging the rate applicable on CGPs like IMFA & NALCO for wheeling of their surplus power of **300 MU** (excluding Transmission Loss) from their CGPs to load centres located elsewhere in Odisha.

The revenue to be earned by OPTCL from wheeling of **25525 MU** at the existing transmission tariff of 25 P/U will be **Rs.638.43 Crore**. The details of the same are given in the **Table-25** below:

Table-25

Calculation of Revenue at the existing Transmission Charge @ 25 P/U							
Sl.No	Customer	Commission's approval for FY 12-13	MU to be handled in FY 13-14	Rate (P/U)	Tr. Loss (%)	Energy handled including Loss	Amount (Rs. Crore)
1	CESU	8236	8854	25	0	8854	221.35
2	NESCO	5306	6100	25	0	6100	152.50
3	WESCO	6496	6821	25	0	6821	170.53
4	SOUTHCO	3047	3350	25	0	3350	83.75
	Total DISTCOs	23085	25125			25125	628.13
5	Emergency Sale to CGPs	100	100	25	0	100	2.50
6	Wheeling to industries from CGPs	300	300	25	3.8	312	7.80
	Total	23485	25525			25537	638.43

OPTCL in the present application has taken the recent realistic demand projection of DISCOMs for FY 2013-14 as has been intimated by them to GRIDCO.

Excess / Deficit of Revenue Requirement:

OPTCL will be having revenue deficit of **Rs. 224.32 Crore** considering the ARR proposed and the revenue to be earned from wheeling of **25525 MU** at the existing transmission tariff of 25 P/U, the details of which are shown in **Table-26** below.

Table-26**(Rs. Crore)**

Deficit of Revenue requirement @ 25 P/U (present tariff rate)	
Total Annual Revenue Requirement	862.75
Less: Revenue earned from Long Term Open Access Customer	638.43
Deficit of Revenue requirement for FY 2013-14 at the existing Wheeling Rate @ 25 P/U	-224.32

Proposal for revision of Transmission Tariff/ Wheeling Charges

OPTCL, with its present transmission tariff, cannot meet its proposed revenue requirement and will suffer revenue deficit of **Rs. 224.32 Crore** at the existing transmission tariff of 25 P/U. In order to meet the deficit, OPTCL submits this application before Hon'ble Commission with humble request to approve its proposed ARR, the Transmission Tariff and Transmission Loss for FY 2013-14 to be effected from 01.04.2013.

Computation of Transmission Tariff based on Rs./ Unit approach to meet the proposed ARR for FY 2013-14

OPTCL proposes Transmission Tariff @ **33.80 P/U** to recover the proposed ARR of **Rs.862.75 Crore**, the details of which are shown in the **Table-27** below:

Table-27

Items	OPTCL Proposal
(a) Total Annual Revenue Requirement in Rs. Crore	862.75
(b) Total Million Units proposed for Wheeling	25525
(c) Proposed Transmission Tariff in P/U = (a/b)	33.80

OPEN ACCESS CHARGES:**Long Term Open Access Charges in terms of Rs./ MW / Day**

The Hon'ble Commission has notified the Open Access Regulation under section 42 (2) of the Electricity Act, 2003. Consumers availing open access shall be required to pay the transmission charges for use of the transmission lines and substations of OPTCL. The Long Term Transmission Charge on the basis of MW flow by adopting the formula as provided in the OERC (Determination of Open Access Charges) Regulations 2006 dated 06.06.2006 is:

$$LT\ Rate = \frac{Net\ proposed\ Transmission\ Cost\ (NTPC)}{365 \times Average\ Demand\ in\ the\ State\ (MW)}$$

Short Term Open Access Charges in terms of Rs. / MW / Day

The revenue from Short Term Open Access Charges earned from Short Term Open Access Customers is uncertain and therefore, OPTCL has not factored the same in to the Miscellaneous Receipts proposed in this application. It is submitted that the Short Term Open Access Charges is proposed and that the same will be adjusted in the revenue as year-end-adjustments at the end of the year on actual basis. Therefore, OPTCL considers Short Term Access Charges as Nil in this Application.

As per Chapter II, Para4 (1) (viii), OERC (Determination of Open Access Charges) Regulations 2006 dated 06.06.2006 (in short "Regulations 2006"), the Short Term Open Access Charges is calculated as :

$$ST\ Rate = 0.25 \times \frac{Net\ proposed\ Transmission\ Cost\ (NTPC)}{365 \times Average\ Demand\ in\ the\ State\ (MW)}$$

Surcharge and/ or any other charge on Short Term Open Access, if any, as decided by the Hon'ble Commission will be leviable.

The transmission charges payable by a very short-term customer using the system for fraction of a day in case of uncongested transmission corridor shall be levied as under, namely: -

- (a) Up to 6 hours in a day in one block: ¼th of the ST_rate
- (b) More than 6 hours and up to 12 hours in a day in one block: ½ of ST_rate
- (c) More than 12 hours and up to 24 hours in a day in one block: equal to ST_rate

The transmission charge payable by a short-term customer shall be for one day and in multiples of whole number of days.

The transmission licensee shall retain 25% of the charges collected from the short-term customers and the long-term customers shall adjust the balance 75% towards reduction in the transmission charges payable.

Wheeling charges shall be determined on the basis of same principles as laid down for intra-state transmission charges and in addition would include average loss compensation of the relevant voltage level as approved by OERC for the previous year subject to year-end adjustment.

In view of the above the estimated energy for transmission in OPTCL's system is **25525 MU**. Considering the methods shown above, the Long term Open Access Charges and Short term Open Access Charges in terms of Rs./MW/Day are proposed in the **Table-28** below considering the Annual Revenue Requirement of **Rs. 862.75 Crore**.

Table-28

ABSTRACT OF OA CHARGES PROPOSED BY OPTCL FOR FY 2013-14	
DETAILS	In Rs. Per Unit approach
Net Annual Revenue Requirement (Rs. Crore)	862.75
Proposed Energy to be transmitted in OPTCL Network (MU)	25525
Proposed Transmission Tariff (P/U)	33.80
Power Flow (Equivalent of 25525 MU) in MWs	2914
Long term Open Access Charges in terms of Rs./MW/Day	8112
Short term Open Access Charges in terms of Rs./MW/Day	2028

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

REACTIVE ENERGY CHARGES

As per Regulation 4 (5) (i) under Chapter-II (CHARGES FOR OPEN ACCESS) of the Regulations 2006, the Hon'ble Commission shall separately determine charges for KVarh consumption from the grid in terms of paisa /unit and the Open Access Customers shall pay the same.

GRID SUPPORT CHARGES (GSC)

OPTCL has filed an application (Case No. 46/2012) before Hon'ble Commission seeking Commission's approval for levy of Grid Support Charges (GSC) for FY 2012-13 from the CGPs running in parallel with OPTCL network. The application is pending for disposal. Based on the outcome of this case, OPTCL may be allowed to file application for levy of GSC from the CGPs for FY 2013-14.

PRAYER

Based on the facts and submissions made in the foregoing paragraphs, OPTCL humbly prays before Hon'ble Commission to kindly approve the proposed ARR and Transmission Tariff for FY 2013-14 as under:

- (i) Annual Revenue Requirement **of Rs.862.75 Crore.**
- (ii) Recovery of Transmission Charge **@ 33.80 P/U.**
- (iii) Transmission Loss for wheeling as **3.8%** on energy drawl

for which the applicant as in duty bound shall ever pray.

BY THE APPLICANT
THROUGH

Bhubaneswar
November 29, 2012

General Manager (RT&C)
Odisha Power Transmission Corporation Limited

**BEFORE THE ODISHA ELECTRICITY REGULATORY COMMISSION
BHUBANESWAR**

**Case No.-----
Filing No. 1**

IN THE MATTER OF: An application for approval of Annual Revenue Requirement and Transmission Tariff for the Financial Year 2013-14 under Section 62, 64 and all other applicable provisions of the Electricity Act, 2003 read with relevant provisions of OERC (Terms and Conditions for Determination of Tariff) Regulations, 2004 and OERC (Conduct of Business) Regulations, 2004, and other tariff related matters.

**AND
IN THE MATTER OF:** Odisha Power Transmission Corporation Limited, Janpath, and Bhubaneswar-751022.

... Applicant

Affidavit verifying the Application

I, Bimal Prasad Mishra, son of Late Umesh Chandra Mishra, aged about 55 years, residing in GRIDCO Colony, Bhubaneswar, do solemnly affirm and say as follows:

1. That I am the General Manager, Regulation, Tariff and Commercial Wing, OPTCL, the Applicant and have been duly authorized by the said Applicant to make this affidavit on its behalf.
2. That the Statements made in paragraphs herein above are based on official information and I believe them to be true.

Bhubaneswar
November 29, 2012

DEPONENT

Annexure – A**Proposed Schedule of Transmission Charge of OPTCL for FY 2013-14****Transmission Charge**

This Charge is applicable for wheeling of GRIDCO power from generating points to the supply point of Distribution & Retail Supply Licensee and wheeling of power for CGPs. The total charges shall be calculated by summation of following charges stated in Para (a) to (d) below as applicable:

(a) Transmission Charge:

- Transmission Charge @ **33.80 P/U** shall be applicable for transmission of power at 400 kV/ 220 kV/ 132 kV over OPTCL's EHT transmission system for the purpose of transmission of energy from generator end to the substation from where energy will be fed to DISCOMs and CGPs.
- Transmission Loss @ **3.8%** 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.

The Transmission Charge shall be applicable to the DISCOMs and CGPs, the Long Term Open Access Customers of GRIDCO for the respective month.

(b) Rebate:

- On payment of monthly bill, the Open Access Customer shall be entitled to a rebate of Two percent (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.

(c) Delayed Payment Surcharge:

- 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 2% (two percent) 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).

(d) Duty and Taxes:

- The Electricity Duty levied by the Government of Orissa 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.