

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

Submitted by

***OPTCL***

For

***FY 2021-22***

## **Summary of OPTCL's ARR & Transmission Tariff filing For FY 2021-22**

- 1) In exercise of powers conferred under Sections 39,131,133 and 134 of the Electricity Act, 2003 read with Sections 23 & 24 of the Orissa Electricity Reform Act, 1995, the State Government published the Orissa Electricity Reform (Transfer of Transmission and Related Activities) Scheme, 2005 ("Transfer Scheme") in the Gazette dated 09.06.2005 which was effective retrospectively from 01.04.2005 wherein the Transmission Undertaking (the Undertaking related to the activities of Transmission, State Transmission Utility and State Load Dispatch Centre and acts incidental and ancillary thereto) of the Grid Corporation of Odisha Limited (Transferor), (now renamed GRIDCO Ltd.- "GRIDCO") has been transferred and vested in Odisha Power Transmission Corporation Limited ("OPTCL").
- 2) As per Clause 10 of the Transfer Scheme, OPTCL is a deemed Transmission Licensee under Section 14 of the Electricity Act 2003 for undertaking the business to transmit electricity in the State of Odisha. OPTCL has also been notified as the State Transmission Utility and accordingly, shall discharge the State Load dispatch functions from the date of transfer till further orders of the State Government.
- 3) As provided under Regulation 53 (1) at Chapter VIII of OERC (Conduct of Business) Regulations, 2004 and under Clause 19.3 of License, Conditions of OPTCL, OPTCL is required to submit its Aggregate Revenue Requirement (ARR) application for the ensuing year before Hon'ble 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 30<sup>th</sup> November of every year of the Control Period. In compliance of the above, OPTCL submits its Aggregate Revenue Requirement & Transmission Tariff application for FY 2021-22 for kind approval of the Hon'ble Commission. Although the applicability of the Transmission Tariff Regulations, 2014 has ceased to continue beyond 31.03.2019, the Hon'ble Commission vide para 186 of the order dated 21.04.2020 (Case No. 72/2019) in exercise of power conferred under Regulation 9.1 of the said Regulations, 2014 has extended the same until further order. Hence, OPTCL has adopted the principles enunciated in the Transmission Tariff Regulations, 2014 for proposing the different components of ARR for FY 2021-22.

### **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 exceeding 12 years but not exceeding 25 years. Based on such premise, four DISCOMs, NALCO, IMFA and BEL happen to be the long term customers of OPTCL.
  - (b) **Medium Term Open Access Customers (MTOA Customers)**

Medium Term Open Access means the open access for a period exceeding three (3) months but not exceeding three (3) years.

**(c) Short Term Open Access Customers (STOA Customers)**

Short Term Open Access means open access for a period up to one (1) month at a time.

Medium-term open access or short-term open access shall be granted if the resultant power flow can be accommodated in the existing transmission system or the transmission system under execution, provided no augmentation shall be carried out for the sole purpose of granting such open access.

**Formulation and Computation of Transmission Charges**

- 5) The Hon'ble Commission has framed OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 (hereinafter called "OERC Regulations, 2014) for determination of Intra-State Transmission Tariff which has been published in Extra Ordinary issue of the Odisha Gazette on 04.12.2014. The said Regulations are effective from 04.12.2014 and are to be followed by the Transmission Licensee while formulating its ARR and Transmission Tariff application.

OPTCL has formulated its present ARR & Transmission Tariff application for FY 2021-22 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 2021-22 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**

- 6) As per the Regulation 8.2 of OERC Regulations, 2014, Operation and Maintenance (O&M) expenses shall include:
- (a) Salaries, wages, pension contribution and other employee costs;
  - (b) Administrative and General Expenses;
  - (c) Repairs and Maintenance;
  - (d) Expenses related to auxiliary energy consumption in the sub-station for the purpose of air-conditioning, lighting, technical consumption, etc.; and
  - (e) Other miscellaneous expenses, statutory levies and taxes (except corporate income tax)

OPTCL's submission in this regard is given below.

### **Salaries, wages, pension contribution and other employee costs**

- 7) The Employee Expenses for FY 2021-22 estimated as **Rs. 532.73 Cr** including Terminal Benefit Liability and impact of 7<sup>th</sup> Pay Commission (remaining 50% towards arrear pay of Rs. 44.12 Cr for pay revision of Executives and Non-Executives of OPTCL). It is expected that State Govt. will issue notification towards release of the balance 50% in the next FY 2021-22. Hence, OPTCL has proposed **Rs. 44.12 Cr.** towards balance 50% arrear pay. The employee expenses calculation has been made on the basis of (i) employee cost, (ii) terminal benefit liability of employees and existing pensioners and (iii) balance arrear salary payment (50%) to existing employees.
- 8) A significant number of posts are lying vacant at the base level due to retirement, death, promotion etc. as a result of which functioning of the organization has been seriously affected. OPTCL plans to fill up the vacancies in a phased manner and accordingly the recruitment process has been initiated. In the meantime some additional manpower has been inducted and more will be recruited in coming years. Revised Organization Restructuring & Manpower Assessment has been implemented with effect from 01.01.2014 in OPTCL to meet needs of important activities of the transmission utility like Project Implementation, O&M, Telecom, Finance and IT support etc. With notification of Organization Structure & Manning Norm, recruitment of Degree & Diploma Engineers has been started by OPTCL.
- 9) The employee cost details include Basic Pay and Grade Pay, Dearness Allowance, House Rent Allowances, Other Allowances, Bonus, Stipend for new recruits, reimbursement of medical expenses, expenses on outsources engagement, leave

travel concession, honorarium, Ex-gratia and misc. expenses, staff welfare expenses, arrear salary due to 7<sup>th</sup> Pay revision and wage revision, terminal benefits etc.

### Administrative and General (A&G) Expenses

10) The A&G Expenses include property related expenses, communication, professional charges, conveyance and travelling, SLDC charges, licensee fee, material related expenses etc. OPTCL has proposed **Rs. 38.13 Cr** towards A&G Expenses for FY 2021-22. OPTCL submitted that due to growth and expansion of Transmission network, number of offices in headquarters as well as in field have increased over a period of time which requires the base A&G expenses to be revised over and above which WPI factor has to be factored in for arriving at the A&G expenses.

11) The number of establishments/ offices of OPTCL have increased over a period of time commensurating with the increase in asset by addition of grid sub-stations, ckt kilometers of lines and MVA capacity for better supervision in construction, operation and maintenance and for maintaining quality of supply. Hence, A&G expenses should be increased proportionately.

A comparative chart of asset addition is given under.

Year	No. of Grid substations	MVA capacity	Ckt. Kms. of Line
2012-13	101	11554	11386
2018-19	148	19231	13995

Comparative chart of number of Establishments:

Year	Subdivisions	Divisions	Circles	Zones	CGMs	Directors
2012-13	190	38	11	0	5	4
2018-19	278	63	16	5	10	6

### Repair and Maintenance (R & M) Expenses

12) 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 2021-22 is **Rs. 151.10 Cr**, as shown in the **Table-1** below:

**Table-1 Repairs and Maintenance Expenses for FY 2021-22 (Rs.Cr)**

Particulars	OERC Approval (FY 2019-20)	OERC Approval (FY 2020-21)	Projection (FY 2021-22)
(i) O&M	<b>115.22</b>	<b>115.22</b>	123.09
(ii) Telecom			3.39
(iii) Civil Works			20.40
(iv) Information Technology			4.23
<b>Total R &amp; M Expenses</b>			<b>Rs. 151.10Cr.</b>

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

13) **Grid Coordination Committee (GCC) Expenses:** Under (GCC) expenses, OPTCL proposes **Rs. 0.35 Cr** towards annual GCC Expenses for FY 2021-22 in line with the Orissa Grid Code (OGC) Regulations, 2015.

14) Taking into account the proposed expenditure towards manpower (Employee Cost including Terminal Benefit), Repair & Spares (R&M Expenses) towards consumables, insurance and overheads (A&G Expenses), GCC expenses, OPTCL proposes the O&M Expenses as **Rs.722.32 Cr**. The summary of O&M Expenses for FY 2021-22 is shown in the **Table-2** below:

**Table-2 Summary of O&M Expenses for FY 2021-22**

Particulars	Amount
	(Rs. Cr.)
(i) Employees Cost including Terminal Benefits	532.7269
(ii) A&G Cost	38.1344
(iii) R&M Cost	151.1041
(iv) Expenses related to auxiliary energy consumption in sub-stations	0.0000
(v) Other miscellaneous expenses, statutory levies and taxes (GCC expenses)	0.3500
<b>Total O&amp;M Expenses</b>	<b>Rs. 722.3154Cr. Say 722.32 cr.</b>

#### Interest and Financial Charges

##### 15) Interest on Loan

Interest on loan for FY 2021-22 has been projected as **Rs.150.46 Cr**. Details of interest on loan capital are shown in the **Table-3** below:

**Table-3 Interest on Loan for FY 2021-22 (Rs. Cr)**

	Rate of Interest	Principal as on 01.04.21	Loan to be received (FY 21-22)	Loan to be redeemed (FY 21-22)	Interest payment (FY 21-22)	Total Payment (FY 21-22)
<b>A</b>	<b>Govt. Loans</b>					
GoO Bonds	13.00%	200.00			26.00	26.00
<b>Sub-Total</b>		<b>200.00</b>			<b>26.00</b>	<b>26.00</b>
<b>B</b>	<b>Institutional Loans</b>					
Bank of India	8.35%(Avg.)	31.87	-	6.75	2.38	9.13
REC Loan	10.96%(Avg.)	166.62	-	24.35	17.94	42.29
PFC Loan	11.36%(Avg.)	31.01	-	6.74	3.57	10.31
Union Bank of India	8.10% (Avg.)	445.09	90.00	45.11	36.35	81.46
JICA	8.23%(Avg.)	499.99	310.00	80.61	50.05	130.66
New Loan	8.10% (Avg.)	-	350.00	-	14.17	14.17
<b>Sub-Total</b>		<b>1174.58</b>	<b>750.00</b>	<b>163.56</b>	<b>124.46</b>	<b>288.02</b>
<b>C</b>	<b>Grand Total</b>	<b>1374.58</b>	<b>750.00</b>	<b>163.56</b>	<b>150.46</b>	<b>314.02</b>

16) **Interest on Working Capital:**

As per the Regulation 8.26 of OERC Regulations, 2014, the rate of interest for working capital shall be on normative basis and shall be equal to the SBI Base Rate plus 300 basis points as on 1st January of the preceding year for which tariff is determined:

Provided that in case of STU (OPTCL), the Commission shall determine the quantum of working capital if needed depending on the cash flow position of the licensee and shall allow interest on the same.

OPTCL submitted that the Working Capital is estimated as Rs. 281.86 Cr. The interest on working capital works out to **Rs. 31.43 Cr.** considering interest rate of 11.15%.

- 17) **Rebate:** OPTCL has projected 2% rebate amounting to **Rs.26.14 Cr.** which is calculated based on the projected ARR for the FY 2021-22.

**New Projects**

- 18) OPTCL proposes to spend **Rs.1361.36 Cr.** during FY 2021-22 towards Capital Expenditure (CAPEX) on new projects in different streams of activities like O&M, Telecom, IT, Construction and Civil Works and construction. The summary of proposed CAPEX under various wings is furnished in the **Table-4** below:

**Table-4 Projected CAPEX for new projects - FY 2021-22**

Particulars	Amount (Rs. Cr.)
(i) Telecom Wing	28.30
(ii) Existing Assets (O&M Wing)	55.87
(iii) Information Technology (IT Wing)	28.95
(iv) Civil Wing	18.57
(v) New Transmission Projects (Construction Wing)	1229.67
<b>Total Capital Expenditure [(i)+(ii)+(iii)+(iv)+(v)]</b>	<b>Rs.1361.36 Cr.</b>

- 19) **CAPEX for telecom related projects:** The CAPEX proposal for the FY 2021-22 in respect of Telecommunication work is summarized as follows:

1. Provision of Optical Fibre based communication through OPGW for providing reliable communication to all Grid s/s in OPTCL with PSDF support
2. Provision of Digital Tele-protection coupler (DTPC) in all 220kV and higher kV lines of OPTCL
3. Implementation of OPGW communication scheme for upcoming line sections of OPTCL (Considering a tentative 400 Ckt km will be added every year)

- 20) Provision of **Rs. 28.30 Cr** is proposed for FY 2021-22 towards **CAPEX pertaining to Telecommunication Wing**, the details of which are shown in the **Table-5** below:

**Table -5 CAPEX - Telecom Projects - FY 2021-22**

Sl. No.	ITEM	Amount (Rs Cr.)
1	Provision of Optical Fibre based communication through OPGW for providing reliable communication to all Grid s/s in OPTCL with PSDF support	12.21
2	Provision of Digital Tele-protection coupler (DTPC) in all 220kV and higher kV lines of OPTCL	4.09
3	Implementation of OPGW communication scheme for upcoming line sections of OPTCL	12.00
	<b>TOTAL</b>	<b>Rs.28.30 Cr.</b>

21) **CAPEX for Existing Assets (O&M Wing):** An amount of **Rs. 55.87 Cr.** has been proposed for the FY 2021-22 under CAPEX to meet the future load growth basically by way of transformer capacity augmentation / sub-station capacity enhancement by installing additional / 3rd transformers in the existing grid sub-stations & to mitigate the over voltage problems by replacement of ACSR LYNX Conductor with ACSR Panther Conductor. Special Projection of Rs. 15.00 Cr. for Sub-Station Automation System (SAS) has been made. The details of item wise CAPEX for O&M related projects are shown in the **Table-6** below.

**Table-6 CAPEX Existing Assets – (O&M WING) - FY 2021-22**

SL NO.	DESCRIPTION	UNIT RATE (CR.)	Quantity	AMOUNT (CR.)
<b>1</b>	<b>Procurement of Transformers with cost of erection</b>			
(I)	160MVA, 220/132 kV (TARKERA, THERUVALI)	5.01	2	10.02
(II)	40MVA, 132/33 kV (ROURKELA)	2.22	1	2.22
(III)	20MVA, 132/33 kV (KHARAGPRASAD, RAYAGADA, MARSHAGHAI)	1.67	3	5.01
iv)	20MVA, 132/33 kV (MARSHAGHAI)	1.40	1	1.40
v)	Erection cost of all above 07 no. of transformers	10% of procurement cost	7	1.86
<b>2</b>	<b>Sub-station Automation</b>			
(I)	At Chainpal, Dhenkanal, Ranasinghpur, Khajuriakata, Bhubaneswar, Sunabeda, Sadeipali, Laxmipur, Narendrapur, Rayagada Grid Sub-Station.		10	15.00
<b>3</b>	<b>Replacement of conductors</b>			
(I)	132kV Chatrapur- Ganjam SC line			0.85
(II)	132kV Burla (PH) - Boinda SC line- Ganjam SC Line			8.74
(III)	220kV Therubali- Bhanjanagar DC Ckt.II			10.77
	<b>TOTAL</b>			<b>Rs. 55.87 Cr.</b>

- 22) **CAPEX for Information Technology (IT) related projects:** Provision of **Rs. 28.95 Cr.** is made for FY 2021-22 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 2021-22**

Sl. No.	Project Description	Amount (Rs. Cr.)
1	End-User IT Systems	2.50
2	Networking Equipments	5.866
3	GIS	0.579
4	Smart Grid Initiatives (AMI)	0.50
5	CCTV & VC	3.50
6	i) intelligent-ERP	10.00
	ii) Work Automation	1.00
	iii) Big Data , Data Analysis, Business Intelligence (BI) & Data Science	5.00
<b>TOTAL</b>		<b>Rs. 28.95 Cr.</b>

- 23) **CAPEX for civil works:** OPTCL proposes CAPEX of **Rs. 18.57 Cr.** relating to Civil Works during FY 2021-22 for new upcoming projects which have been detailed in **Table-8** below.

**Table-8 CAPEX - CIVIL WORKS PROJECTS - FY 2021-22**

Sl. No.	Description of Works	Amount (Rs. Cr.)
1	Construction of multi-storied office complexes of OPTCL	13.87
2	Construction of approach roads inside various grid sub-stations of OPTCL	1.9
3	Construction of Compound wall inside various grid sub-stations of OPTCL	0.8
4	Construction of Store, Vehicle Sheds and open stockyards inside various grid sub-stations of OPTCL	1.3
5	Construction of retiring rooms, watch tower, control room extensions, minor office buildings inside various grid sub-stations of OPTCL	0.7
<b>TOTAL</b>		<b>Rs. 18.57 Cr.</b>

- 24) **CAPEX for New Transmission Projects (construction wing):** It has been planned to spend an amount of **Rs. 1229.67 Cr.** on transmission related infrastructure during FY 2021-22 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 New Transmission Projects (Construction Wing) FY 2021-22

Sl. No.	Description of the Project/Scheme	Expenditure during FY 2020-21			Projected expenditure FY 2021-22
		Actual For First Six Months	Projection For Balance Six Months	Total	
A	ONGOING SCHEME				
1	2	3	4	5	6
1	132kV <b>Bhadrak-Anandpur</b> S/C line		2.80	2.80	2.00
2	132/33kV <b>Agarpada</b> S/S with line	0.06	10.01	10.07	
3	220/132kV <b>Atri (Karadagadia)</b> S/Swith line	2.40	1.60	4.00	
4	220/132/33kV <b>Pratapsasan</b> S/S with line	4.00	4.00	8.00	6.65
5	3rd ICT at 400/220kV <b>New Duburi</b> S/S	1.02	4.80	5.82	
6	2X20MVA, 132/33kV <b>R.Udayagiri</b> S/Swith line	2.13	0.64	2.77	
7	132/33kV <b>Brajabiharipur</b> , Cuttack with LILO.	3.28	7.15	10.43	
8	220/33kV <b>Baliguda</b> S/S with 220kV KesingaBaliguda DC line	1.60	3.40	5.00	0.68
9	132/33kV <b>Satasankha(Puri)</b> S/S with line	2.50	0.50	3.00	
10	132/33kV <b>Betanati</b> S/S with line		8.46	8.46	3.00
11	220/132/33kV <b>Aska</b> S/S with line	1.42	0.10	1.52	
12	220/132/33kV <b>GodaChhak</b> S/S with line		2.15	2.15	2.00
13	132/33kV <b>Unit-8 (BBSR)</b> GIS S/S with line	-	6.04	6.04	
14	132/33kV <b>Mancheswar</b> GIS S/S with line	1.20	7.39	8.59	
15	132kV <b>Phulbani-Boudh</b> S/C line	1.42	2.32	3.74	3.00
16	132kV DC line from 132/33kV GIS <b>Chandbali</b> to 220/132/33kV Grid sub-station, Balimunda, <b>Dhamara</b> .	0.89	2.70	3.59	6.06
17	220kV <b>Pandiabil-Pratapsasan</b> D/C line	0.31	8.58	8.89	2.00
18	220/132/33kV Balimunda, <b>Dhamra S/S</b> with line ( <b>Revival</b> )	14.82	25.18	40.00	25.25
19	132/33kV <b>G.Udaygiri S/S</b> with line	7.24	21.46	28.70	
20	400/220kV GIS at <b>Meramundali-B</b>	15.68	22.85	38.53	15.87
21	220/33kV S/S at <b>Dasapalla</b> with line	4.18	8.00	12.18	23.19
22	220/132/33kV S/S at <b>Kiakata</b> with line	8.64	21.36	30.00	39.00
23	132/33kV S/S at <b>Rajnagar</b> with line	3.39	12.76	16.15	10.50
24	132kV <b>Kuchei-Bangiriposi</b> S/C line	1.15	4.69	5.84	2.00
25	220/33kV S/S at <b>Telkoi</b> with line	6.15	14.61	20.76	12.42
26	132kV <b>Aska-Digapahandi</b> D/C line	2.68	1.32	4.00	
27	220kV <b>Theruvalli-Narendrapur to Aska</b> line	6.06	10.56	16.62	10.15
28	132kV <b>Parlakhemundi -R.Udaygiri</b> D/C line	2.34	7.66	10.00	14.01
29	132/33kV S/S at <b>Gondia</b> with line	3.97	13.13	17.10	6.11
30	220/132/33kV S/S at <b>Turumunga</b> with line	7.33	21.67	29.00	4.00
31	132/33kV S/S at <b>Chandipur</b> with line	1.82	11.04	12.86	9.65
32	132/33kV S/S at <b>Bahugram</b> with line	8.05	5.41	13.46	10.50
33	220/33kV S/S at <b>Palei</b> , Balichandrapur with line	1.36	4.64	6.00	32.36
34	<b>Diversion of one no. 400kV and 4nos 220kV line with 220kV LILO arrangement for connectivity with 400/220kV GIS Meramundali-B.</b>	1.27	10.31	11.58	22.00
35	132/33kV GIS at <b>Hinjuli</b>	5.67	15.14	20.81	5.00

Sl. No.	Description of the Project/Scheme	Expenditure during FY 2020-21			Projected expenditure FY 2021-22
36	220/33kV GIS at <b>Godisahi</b>	0.65	18.59	19.24	14.43
37	220/33kV GIS at <b>Gothapatna</b> (Kantabada)	6.62	12.62	19.24	14.43
38	132/33kV GIS at <b>Nayapalli</b>	0.14	19.86	20.00	47.88
39	132/33kV GIS at <b>Satyanagar</b>	2.21	10.79	13.00	40.75
40	132/33kV GIS at <b>Badagada</b>	0.55	10.45	11.00	40.75
41	220/132/33kV GIS at <b>Balianata</b>	0.65	55.23	55.88	41.92
42	Other works	1.85		1.85	
43	Restoration of 400kV <b>IB-Meramundali</b> DC line from Loc No. 124/2 (Bhusan) to 149/0 (OPGC). Est No. 11/2015-16.		0.50	0.50	-
44	220/132/33kV S/s at <b>Lapanga.</b>		0.29	0.29	
45	220/132/33kV S/s at <b>Kuanrmunda</b>	4.52	12.84	17.36	15.00
46	400/220kV S/s at <b>Lapanga.</b>	0.68	0.19	0.87	
47	132/33kV S/s at <b>Maneswar</b>		12.67	12.67	
48	132/33kV S/s at <b>Hirakud</b>	4.41	6.74	11.15	14.42
49	220/132/33 kV Grid Sub-Station at <b>Bamra.</b> (50% Deposit Work)	10.54	9.59	20.13	15.16
50	132/33kV <b>Pottangi</b> S/S with line	0.13	1.60	1.73	
51	132kV <b>Umerkote</b> S/S with line		1.30	1.30	
52	132/33kV <b>Podagada</b> S/S with line	0.02	1.40	1.42	
53	220kV <b>Jayanagar- PGCIL</b> D/C line with 2 nos. 220kV feeder bays	0.09	0.50	0.59	
54	Conversion of existing <b>Jaynagar-Sunabeda</b> S/C line to D/C line	0.21	7.38	7.59	
55	220/33kV <b>Malkanagiri</b> S/S with line		3.00	3.00	
56	132/33kV <b>Boriguma</b> S/S with LILO		8.59	8.59	10.20
57	220/33kV <b>Kalimela</b> S/S with line	2.82	3.00	5.82	
58	132kV <b>Jayanagar -Tentulikhunti</b> S/C line	1.59	1.50	3.09	
59	220/33kV <b>Govindpalli</b> S/S with line	2.83	3.00	5.83	
60	132kV <b>Podagada-Pottangi</b> S/C line	1.44	4.50	5.94	
61	220/33kV S/s at <b>Kashipur</b>	-	1.27	1.27	-
62	220/132/33kV S/s at <b>Jayapatna</b>	1.49	4.51	6.00	5.00
63	Installation of 20 MVA 220/33kV at 220/33kV Grid S/S <b>Laxmipur.</b>	-	1.40	1.40	
64	220/132/33kV Grid S/s at <b>Gunupur</b>	7.49	22.51	30.00	20.00
65	220/132kV <b>Kesinga</b> S/S with line	1.03	12.00	13.03	2.00
66	220/132/33kV <b>Baragarh</b> (New) S/S	-	0.30	0.30	-
67	132/33kV <b>Kantabanji</b> S/S withline	0.03	-	0.03	-
68	132kV <b>Biramaharajapur</b> S/S with line	2.34	12.29	14.63	6.00
69	132kV <b>Junagarh-Kesinga</b> D/C line	0.15	0.20	0.35	-
70	132kV <b>Nuapada-Padampur</b> line	1.03	10.00	11.03	5.00
71	132/33kV <b>Nabarangpur</b> S/S	3.78	17.39	21.17	1.50
72	132/33kV <b>Lamataput</b> S/S	4.42	6.26	10.68	15.00
73	132kV DC Line From <b>Baner to Jayapatna</b>	0.19	1.31	1.50	
74	132kV DC Line on DC tower from <b>Jaipatna (Baner) to Junagarh</b>	1.40	8.60	10.00	18.62

Sl. No.	Description of the Project/Scheme	Expenditure during FY 2020-21			Projected expenditure FY 2021-22
75	220kV LILO of <b>Bolangir-Kesinga</b> line to 400/220kV <b>Madhiapali</b>	-	0.50	0.50	-
76	<b>132kV LILO of Bargarh-Barpali</b> line to 220/132/33kV <b>Bargarh</b>	-	0.90	0.90	
77	132/33kV <b>Bhatli</b> S/S with line	3.90	20.00	23.90	12.22
78	220/33 kV S/s at <b>Deogarh</b>	4.20	5.54	9.74	2.28
79	220/33kV Grid S/s at <b>Lephripada</b>	2.38	6.60	8.98	6.45
80	132/33kV S/s at <b>Lakhanpur</b>	2.72	8.25	10.97	3.51
81	132/33kV <b>Thuapalli</b> S/S with line	3.28	16.00	19.28	4.00
82	132 KV D/C line from <b>Lapanga to Brajarajnagar</b>	0.21	2.57	2.78	3.85
	<b>TOTAL OF A</b>	<b>206.01</b>	<b>668.96</b>	<b>874.97</b>	<b>627.77</b>
<b>B</b>	<b>NEW PROJECTS</b>				
1	400/220kV GIS at <b>Ramakrushnapur</b>				36.80
2	400/220kV S/S at <b>Khuntuni</b>				80.00
3	220/132kV GIS at <b>Dhenkanal-B</b>				30.00
4	220/132/33kV GIS at <b>Kuakhia</b>	-			23.00
5	220kV <b>LILO of 220kV TTPS-Joda</b> to 220/33kV GIS <b>Kekonjhar</b>	0.62	1.38	2.00	18.00
6	400/220/33kV GIS at <b>Paradeep</b> with line				80.00
7	400kV & 220kV LILO line to 400/220kV GIS at <b>Ramakrishnapur</b> , 220kV & 132kV LILO line to GIS at <b>Kuakhia</b> & 220kV LILO line to GIS at <b>Dhenkanal-B</b>				36.88
8	400/220kV GIS S/s at <b>Narendrapur</b>				80.00
9	220/132kV S/S at <b>Nuapada</b>				35.59
10	132kV line 2nd Circuit from <b>Bhadrak to Anandpur</b>				3.00
11	<b>400kV DC line</b> from 400/220kV <b>Narendrapur</b> S/s to 400kV S/s of <b>PGCIL at Jeypore</b> with LILO at <b>Theruvalli</b> with Bay Extn.				60.00
12	132/33kV S/s at <b>Brundabahal</b>				30.00
13	132/33kV S/S <b>Tarbha</b>				20.00
14	132kV UG cabling from <b>Arugul- Ransinghpur</b>				14.63
15	220kV <b>Balimela- Jayanagr LILO</b> at Govindpalli				1.51
16	132kV SC on DC tower <b>Kantabanji-patnagarh</b>				5.69
17	132kV LILO <b>Budipadar-Sundargarh</b> at Bamra				5.69
18	132kV SC on DC tower <b>Ghens-Padamapur</b>				4.55
19	132kV LILO <b>Chhend -Nuagaonat</b> Kuarnmunda				1.72
	<b>TOTAL OF B</b>	<b>0.62</b>	<b>1.38</b>	<b>2.00</b>	<b>567.06</b>
<b>C</b>	<b>DEPOSIT WORK</b>				
1	RTSS at <b>Kendrapara</b>	0.69	0.31	1.00	
2	RTSS at <b>SIJU</b>	0.85	0.63	1.48	
3	RTSS at <b>Charbatia</b>	0.34	3.66	4.00	
4	RTSS at <b>Sukinda</b>	0.38	1.62	2.00	

Sl. No.	Description of the Project/Scheme	Expenditure during FY 2020-21			Projected expenditure FY 2021-22
5	RTSS at <b>Dhanmandal</b>	0.99	3.01	4.00	
6	<b>Kharasrota</b> (knpd-Marsh)-9 Loc	1.26	2.74	4.00	
7	<b>Kharasrota</b> (NWW)-7 Loc	0.86	3.14	4.00	
8	220kV 2 phase line on DC tower from <b>Bonai to RTSS Bimalagarh</b>	0.09	2.25	2.34	0.16
9	132kV DC line(4 conductor) from <b>Brajarajnagar to RTSS at Belpahar</b>	0.32	3.96	4.28	0.29
10	132 kV DC line(2 conductor) from <b>Brajarajnagar to RTSS at Kechhobahal</b>	0.86	1.00	1.86	
11	132kV S/c (2 Conductor) line from <b>Lapanga to RTSS Rengali</b>	1.10	1.00	2.10	
12	132kV S/c (2 Conductor) line from <b>Maneswar to RTSS Maneswar</b>		2.79	2.79	
13	Diversion of 132kV D/C Line from <b>NSPCL, Rourkela to MSDS-V, SAIL, RSP</b>	0.08	0.68	0.76	
14	220/132/33kV Grid S/s at <b>Bamra</b> . (50% Deposit Work)	10.54	13.59	24.13	14.16
15	132kV D/c (4 conductor) line from <b>Bamra to RTSS, Dhutra</b>	3.23	9.73	12.96	6.49
16	132kV D/C (4 Conductor) line from <b>Bamra to RTSS, Garposh</b>	0.92	3.91	4.83	2.61
17	132kV D/C (4 Conductor) line from <b>Bamra to RTSS, Bamra</b>	0.08	0.23	0.31	0.93
18	132kV SC Line (Two phase) from <b>Muniguda to RTSS at Bisamcuttack</b>	0.32	0.18	0.50	-
19	220kV SC (2phase) line from <b>Therubalito RTSS Bhalumaska</b>	0.15	1.35	1.50	2.00
20	132kV SC ( 2 phase) Traction line from <b>Bhawanipatna to RTSS Lanjigarh</b>	0.51	1.49	2.00	-
21	220kV Traction line from <b>Laxmipur to RTSS Laxmipur.</b>	1.30	4.43	5.73	2.00
22	RTSS at <b>Kesinga</b>	0.60	-	0.60	-
23	RTSS at <b>Nuapada</b>	0.44	0.30	0.74	-
24	RTSS at <b>Dunguripali</b>	-	0.50	0.50	-
25	RTSS at <b>Deogaon</b>	0.60	0.80	1.40	0.50
26	RTSS at <b>Godbhaga</b>	-	2.00	2.00	1.00
27	132kV 2Phase line from <b>Bhawanipatna to Bhawanipatna RTSS</b>	-	2.30	2.30	0.70
28	132kV 2 Phase line from <b>Gunupur to Palasingh RTSS</b>	-	6.00	6.00	4.00
	<b>TOTAL of C</b>	<b>26.50</b>	<b>73.60</b>	<b>100.10</b>	<b>34.84</b>
<b>D</b>	<b>TOTAL -Construction) D = A+B+C</b>	<b>233.14</b>	<b>743.93</b>	<b>977.07</b>	<b>1,229.67</b>

### Depreciation

25) The Gross Fixed Assets at the beginning of the FY 2021-22 is estimated as Rs. 7,804.29 Cr. (Rs. 6,560.81 Cr. as on 01.04.2020+Rs.1,243.48 Cr. projected addition during FY 2020-21). For the FY 2021-22 the addition to fixed asset is projected as Rs.

1,829.47 Cr. For 2021-22, Depreciation is estimated as Rs.279.07Cr.which includes Rs.1.85 Cr. towards amortisation of lease hold assets and Rs. 2.57 Cr. towards amortisation of intangible assets.

### **Return on Equity**

26) At the time of de-merger of GRIDCO effective from 1.4.2005, the equity share capital of OPTCL was stated at Rs. 60.07 Cr. Through infusion of additional capital by the state government, the paid up equity capital of OPTCL has increased to **Rs. 859.77 Cr** as on 31.03.2020 as per the Audited Account. Government of Odisha has committed to provide funds of Rs. 250 Cr. as equity over the five year period FY 2017-18 to FY 2021-22 i.e. Rs. 50 Cr. annually. During the current year OPTCL has already received Rs. 50 Cr. from the State Govt. towards the scheme Share Capital Investment to OPTCL. The total Equity Capital as on 31.03.2021 will be Rs. 909.77 Cr. Accordingly, OPTCL proposes Return on Equity (RoE) of Rs. 131.70 Cr. for FY 2021-22 @ 15.5% as per clause 8.28 of Regulations, 2014 on Rs. 849.79Cr. (909.77-60.07) i.e. on opening balance of FY 2021-22.

### **INCOME TAX**

27) As per the Regulation 8.43 of OERC Regulations, 2014, Income tax of the Transmission Licensee shall be recovered from the beneficiaries. As per the Audited Accounts for the FY 2018-19, OPTCL has made provision of Rs. 8.15 Cr. as Income Tax. The same amount of Rs. 8.15 Cr. is proposed for FY 2021-22. However, difference if any, as per the Regulation 8.43 and 8.44, shall be adjusted during the true up exercise based on audited accounts.

### **TRANSMISSION COST**

28) Considering the proposed cost / expenses under different heads, the Transmission Cost of OPTCL for FY 2021-22 is worked out as **Rs. 1349.27 Cr.** Details are shown in the **Table-10** below:

**Table-10 Transmission Cost for FY 2021-22**

<b>Particulars</b>	<b>Amount (Rs. Cr.)</b>
Employee Cost including Terminal Benefits	532.73
R&M Cost	151.10
A&G Cost	38.13
Expenses related to auxiliary energy consumption	0.00
Other miscellaneous expenses, statutory levies and taxes (GCC)	0.35
<b>Sub-Total (O&amp;M Cost)</b>	<b>722.32</b>

Interest on Loan Capital	150.46
Interest on Working Capital	31.43
Rebate	26.14
<b>Sub- Total (Interest &amp; Financial Cost)</b>	208.03
Depreciation	279.07
Return on Equity	131.70
Income Tax	8.15
<b>Total</b>	<b>Rs. 1,349.27 Cr.</b>

**Other Costs:**

**Incentive for system availability:**

29) 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 2019-20 as 99.98% (page 42-81). This is in line with the method of computation of TAFY prescribed in the Appendix B of the OERC Regulations, 2014. 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. 10.62 Cr.** towards system availability for the year 2019-20 using approved ARR figure of Rs. 706.71 Cr. for the said year. Hence, OPTCL proposes **Rs. 10.62 Cr** towards Incentive for System Availability to be allowed in the ARR for FY 2021-22.

**Other income and cost / Miscellaneous receipt:**

30) For the FY 2021-22 OPTCL has proposed Rs. 52.72 Cr. under the Miscellaneous Receipt from different sources such as inter-State wheeling, STOA and STU charges, Bank interest, supervision charges, other Misc receipts etc.

**Current status on revenue earnings from Supervision Charge:**

31) Compared to earlier years, the earning from Supervision Charge is drastically reduced. The number of applicant industries is very less for which revenue from Supervision Charge during the balance period of FY2020-21 would not be appreciable on higher side. Hence, in line with the trend of revenue earning during FY 2020-21, OPTCL expects the Miscellaneous Receipt of Rs. 52.72Cr. during FY 2021-22.

32) The summary of Aggregate Revenue Requirement of OPTCL for FY 2021-22 is shown in the **Table-11** below adding all the projected expenditures as explained in foregoing paragraphs:

**Table-11 Summary of Aggregate Revenue Requirement of OPTCL for FY 2021-22**

ITEMS	Proposal for OPTCL FY 2021-22	
<b>A) FIXED COST</b>		
<b>1. O&amp;M Expenses</b>		<b>722.32</b>
(i) Employees Cost including Terminal Benefits	532.73	
(ii) A&G Cost	38.13	
(iii) R&M Cost	151.10	
(iv) Expenses related to auxiliary energy consumption	0.00	
(v) Other misc. expenses, statutory levies and taxes (GCC)	0.35	
<b>2. Interest &amp; Financial Charges</b>		<b>208.03</b>
(i) Interest on Loan Capital	150.46	
(ii) Interest on Working Capital	31.43	
(iii) Rebate	26.14	
3. Depreciation & amortisation expense		<b>279.07</b>
4. Return on Equity		<b>131.70</b>
5. Income Tax		<b>8.15</b>
<b>Sub-Total (A)</b>		<b>1,349.27</b>
<b>B) Others</b>		
Incentive for system availability		<b>10.62</b>
<b>Total Trans. Cost (A+B)</b>		<b>1,359.89</b>
<b>C) Less Misc. Receipts</b>		<b>52.72</b>
<b>D)ARR to be recovered from LTOA Customers i.e. OPTCL's Aggregate Revenue Requirement</b>		<b>1,307.17</b>

**Transmission loss:**

33) OPTCL has been able to reduce the transmission loss year over year by commissioning a number of new transmission projects and adopting innovative schemes under Master Maintenance Plan during last few years. The actual transmission loss in the OPTCL's transmission system from April' 20 to September'20 is 3.18% against Commission's approval of 3.00% for FY 2020-21. OPTCL expects the loss level to remain around 3.20% in the current year. Accordingly, OPTCL proposes 3.15% transmission loss during FY 2021-22.

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

34) OPTCL has OPTCL in the present application has considered the recent realistic demand projection made by all four DISCOMs which comes about 26680 MU (3045.66 MW) for FY 2021-22. OPTCL envisages 200MU (22.83 MW) energy to be transacted in DISCOMs 33kV & 11kV 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 26480 MU (26680-200) from the total demand projection of DISCOMs.

During FY 2021-22, OPTCL will earn revenue from the LTOA Customers in the following manner:

- (i) By charging the rate applicable on DISCOMs for wheeling of 26480 MU (3022.83 MW).
- (ii) By charging the rate applicable on LTOA customers like IMFA, NALCO& BEL towards wheeling and supply of Emergency/Back-up power of 660 MU(75.34 MW)

The revenue to be earned by OPTCL from wheeling of 27140 MU (26480+660)at the existing transmission tariff of 25 P/U will be Rs. 678.50 Cr.

**Excess/Deficit of Revenue Requirement:**

35) OPTCL has projected revenue deficit of Rs. 628.67 Cr. considering the ARR proposed and the revenue to be earned from wheeling of 27140MU at the existing transmission tariff of 25 P/U, the details of which are shown in **Table-12** below.

**Table-12 Deficit of Revenue requirement 2021-22**

<b>Deficit of Revenue Requirement as per existing transmission tariff @ 25 p/u (Rs. Cr.)</b>	
Total Aggregate Revenue Requirement	1,307.17
Less: Revenue earned from Long Term Open Access Customer	678.50
<b>Deficit of Revenue Requirement for FY 2021-22 at the existing rate @ 25 p/u</b>	<b>-628.67</b>

**Proposal for revision of Transmission Tariff/ Wheeling Charges**

36) OPTCL, with its present transmission tariff, cannot meet its proposed revenue requirement at the existing transmission tariff of 25 p/u and will suffer revenue deficit as mentioned above. In order to meet the deficit, OPTCL submitted before Hon'ble Commission with humble request to approve its proposed ARR, the Transmission Tariff and Transmission Loss for FY 2021-22 to be effected from 01.04.2021.

**Open Access charges:**

37) The table below shows the open access charges proposed by OPTCL for FY 2021-22.

**Table-13 Abstract of OA Charges Proposed by OPTCL for FY 2021-22**

<b>DETAILS</b>	<b>In Rs. Per Unit approach</b>
Net Aggregate Revenue Requirement (Rs. Cr.)	1307.17
Proposed Energy to be transmitted in OPTCL Network (MU)	27140
Power Flow (Equivalent of 27140 MU) in MWs	3098.17
Proposed Transmission Tariff (Rs./MW-Day)	11559.35

**Reactive energy charges**

38) Hon'ble Commission in Para 16 (page 5) of the order dated 05.02.2019 in Case No. 50/2017 has inter alia viewed that the provisional reactive energy charges of 3 paise/kVArH as allowed in ARR 2018-19 order to continue for time being till a final justification is submitted by OPTCL in consultation with the stakeholders. Accordingly, OPTCL is holding consultation with the stakeholders at regular intervals and some more time is required in this regard. OPTCL therefore proposes that 3 paise/kVArh may be approved provisionally as Reactive Energy Charges FY 2021-22.

**Levy of grid support charges (GSC)**

39) OPTCL has filed a petition before Hon'ble Commission on 23.09.2020 for determination and approval for levy of Grid Support Charges for industries having Captive Generating / Cogeneration plants and running in parallel with the Grids of OPTCL. This will generate additional revenue for OPTCL. Hon'ble OERC has issued a notice & listed the above mentioned application as Case No. 52/2020. The Secretary, OERC vide public notice dated 18.11.2020 has invited various stakeholders to participate in the Public hearings through Video Conferencing for disposal of the same. In the meantime, on 17.11.2020 and 22.12.2020 hearings were conducted through video conferencing and the next date of hearing is scheduled to be held on 13.4.2021.

**Proposed Schedule of Transmission Charge of OPTCL for FY 2021-22**

**40) Transmission Charge:**

Transmission Charge @ 11559.35Rs./MW-Day shall be applicable for transmission of power at 400kV/220kV/132kV over OPTCL's EHT transmission system for the purpose of transmission of energy from generator end to the sub-station from where energy will be fed to DISCOMs and CGPs.

Transmission Loss @3.15% 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, Medium 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.

**Rebate:**

- 41) 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:**

- 42) 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:**

- 43) 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.

**PRAYER**

44) OPTCL's proposal for FY 2021-22 are:

1. Aggregate Revenue Requirement of Rs.1307.17 Cr.
2. Recovery of Transmission Charge @ 11559.35 Rs./MW-Day(48.164 Paise/Unit)
3. Transmission Loss for wheeling as 3.15% on energy drawl

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