

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

Submitted by

OPTCL

For

FY 2017-18

Summary of OPTCL's ARR & Transmission Tariff filing For FY 2017-18

- 1) In exercise of powers conferred under Sections 39,131,133 and 134 of the Electricity Act, 2003 read with Sections 23 & 24 of the Orissa Electricity Reform Act, 1995, the State Government published the Orissa Electricity Reform (Transfer of Transmission and Related Activities) Scheme, 2005 ("Transfer Scheme") in the Gazette dated 09.06.2005 which was effective retrospectively from 01.04.2005 wherein the Transmission Undertaking (the Undertaking related to the activities of Transmission, State Transmission Utility and State Load Dispatch Centre and acts incidental and ancillary thereto) of the Grid Corporation of Odisha Limited (Transferor), (now renamed GRIDCO Ltd.- "GRIDCO") has been transferred and vested in Odisha Power Transmission Corporation Limited ("OPTCL").
- 2) As per Clause 10 of the Transfer Scheme, OPTCL is a deemed Transmission Licensee under Section 14 of the Electricity Act 2003 for undertaking the business to transmit electricity in the State of Odisha. OPTCL has also been notified as the State Transmission Utility and accordingly, shall discharge the State Load dispatch functions from the date of transfer till further orders of the State Government.
- 3) As provided under Regulation 53 (1) at Chapter VIII of OERC (Conduct of Business) Regulations, 2004 and under Clause 19.3 of Licence Conditions of OPTCL, OPTCL is required to submit its Aggregate Revenue Requirement (ARR) application for the ensuing year before 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 30th November of every year of the Control Period. In compliance of the above, OPTCL herewith submits its Aggregate Revenue Requirement & Transmission Tariff application for FY 2017-18 for kind approval of the Hon'ble Commission.

Categorization of Open Access Customers

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

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

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

East Coast Railway (ECoR) has applied to OPTCL for grant of connectivity and LTOA/MTOA of OPTCL's intra-state network for drawal of power to 29 TSSs of Railway located in Odisha, OPTCL has filed one petition before the Commission on 26.10.2016 in the above matter. OPTCL has prayed therein inter alia to acknowledge ECoR as a "Deemed Distribution Licensee" and declare them as the fifth DISCOM. In the above premises, OPTCL in the present ARR application for FY 2017-18 has projected the demand of ECoR separately (as furnished by each DISCOM) as one LTOA Customer

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

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

Formulation and Computation of Transmission Charges

- 5) The Commission has framed OERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014 (hereinafter called “OERC Regulations, 2014) for determination of Intra-State Transmission Tariff which has been published in Extra Ordinary issue of the Odisha 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 2017-18 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 2017-18 while formulating the ARR and Transmission Tariff have been categorized under the following heads:

I. Fixed Cost

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

II. OTHERS:

- 1) Incentive for System Availability

Details of Fixed charges - O&M Expenses

Salaries, wages, pension contribution and other employee costs

- 6) OPTCL Submitted that, Presently (as on 28.10.2016) the Men in Position (MIP) of OPTCL is 3226 against sanctioned strength of 4929 (Executive-1847 + Non-Executive 3082). A significant number of posts are lying vacant in different ranks as a result of which functioning of the organization has been seriously affected. OPTCL plans to fill up the vacancies in a phased manner and accordingly the recruitment process has been initiated.

- 7) The employee cost details include salaries, dearness allowance, other allowances, stipend, reimbursement of medical expenses, house rent, leave travel concession, honorarium, Ex-gratia and misc. expenses, staff welfare expenses, wage revision arrear etc.
- 8) OPTCL has proposed **Rs. 462.33 Cr** towards Employee Cost, Terminal Benefits and possible impact of 7th Pay Commission including arrear for FY 2017-18. The details are given below:

Table-1 : Employees cost for for FY 2017-18

| SI No | Particulars | Rs. Crore |
|-------|---|---------------|
| 1 | Salary and Allowances | 256.98 |
| 2 | Additional Employees Cost | 7.44 |
| 3 | Other Employee Cost | 19.75 |
| 4 | Terminal Benefits | 188.03 |
| 5 | Sub-total (1+2+3+4) | 472.20 |
| 6 | Less: Employees Cost Capitalized | 9.87 |
| 7 | Net Employees Cost (5-6) | 462.33 |

Administrative and General (A&G) Expenses

- 9) The A&G Expenses include property related expenses, communication, professional charges, conveyance and travelling, SLDC charges, licensee fee and material related expenses. OPTCL has proposed **Rs. 26.11 Cr** towards A&G Expenses for FY 2017-18.

Repair and Maintenance (R & M) Expenses

- 10) 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 2017-18 is **Rs.155.11 Cr** as shown in the **Table-2** below:

Table-2 : Repairs and Maintenance Expenses for FY 2017-18 (Rs.Cr)

| Particulars | OERC Approval (FY 2015-16) | OERC Approval (FY 2016-17) | Projection (FY 2017-18) |
|---------------------------------------|----------------------------|----------------------------|-------------------------|
| (i) O&M | 108.00 | 110.59 | 138.04 |
| (ii) Telecom | | | 2.06 |
| (iii) Civil Works | | | 11.46 |
| (iv) Information Technology and Other | | | 3.55 |
| Total R&M Expenses | | | 155.11 |

Expenses related to auxiliary energy consumption in the sub-stations

- 11) The auxiliary energy consumption in the sub-stations for the FY 2014-15, FY 2015-16 and FY 2016-17 (up to Sept-16) is 10.75MU, 12.19 MU and 5.10 MU respectively. It is estimated that the auxiliary energy consumption for the FY 2017-18 will be about 13 MU. OPTCL proposes **Rs. 3.55 Cr** towards auxiliary energy consumption in the sub-stations.

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

12) **Grid Coordination Committee (GCC) Expenses:** Under (GCC) expenses, OPTCL proposes **Rs. 0.97 Cr** towards annual GCC Expenses for FY 2017-18 in line with the said provisions.

13) **Corporate Social Responsibility (CSR):** The amount estimated to be spent is about **Rs.0.59 Cr** for FY 2017-18 considering 2% of the average profit of about Rs. 29.29 Cr during last 3 years.

14) **Summary of O&M Expenses :** Taking into account the proposed expenditure towards manpower (Employee Cost including Terminal Benefit), Repair & Spares (R&M Expenses) towards consumables, insurance and overheads (A&G Expenses), GCC & CSR expenses, OPTCL proposes the O&M Expenses as **Rs.648.65 Cr** The summary of O&M Expenses for FY 2017-18 is shown in the **Table-3** below:

Table-3: Summary of O&M Expenses for FY 2017-18

| Particulars | Amount (Rs. Cr.) |
|--|------------------|
| (i) Employees Cost including Terminal Benefits | 462.33 |
| (ii) A&G Cost | 26.11 |
| (iii) R&M Cost | 155.11 |
| (iv) Expenses related to auxiliary energy consumption in sub-stations | 3.55 |
| (v) Other miscellaneous expenses, statutory levies and taxes(GCC- 0.97 + CSR-0.59) | 1.56 |
| Total O&M Expenses | 648.65 |

Interest and Financial Charges**15) Interest on Loan**

OPTCL has proposed **Rs.87.95 Cr** towards interest on loan for FY 2017-18 . Details of interest on loan capital are shown in the **Table-4** below:

Table-4 Interest on Loan for FY 2017-18 (Rs. Cr)

| Projection for Interest on loan for FY 2017-18(Rs. Cr.) | | | | | | | |
|---|----------------------------|------------------|-----------------------------|--------------------------------|--------------------------------|-----------------------------|--------------------------|
| | | Rate of Interest | Principal CB as on 31.03.17 | Loan to be received (FY 17-18) | Loan to be redeemed (FY 17-18) | Interest payment (FY 17-18) | Total Payment (FY 17-18) |
| A | Govt. Loans | | | | | | |
| | State Govt. (Cash Loan) | 13.00% | 2.00 | | | 0.26 | 0.26 |
| | State Govt.(CRF) | 0.00% | 15.00 | | | | 0 |
| | GoO Bonds | 13.00% | 400.00 | | | 26.00 | 26.00 |
| | Sub-Total | | 417.00 | | | 26.26 | 26.26 |
| B | Institutional Loans | | | | | | |
| | Bank of India | 9.70% | 200.58 | 89.40 | | 16.53 | 16.53 |
| | REC Loan | | 307.08 | | 32.54 | 37.37 | 69.91 |
| | PFC Loan | | 68.50 | | 6.24 | 5.73 | 11.97 |
| | JICA | 0.80% | 10.00 | 58.00 | | 0.31 | 0.31 |
| | Sub-Total | | 586.15 | 147.40 | 38.78 | 59.94 | 98.72 |
| C | Secured Loan | | | | | | |
| | New Loan (FY 17-18) | 11.75% | | 89.25 | | 1.75 | 1.75 |
| | Sub-Total | | 0 | 89.25 | 0 | 1.75 | 1.75 |
| D | Grand Total | | 1003.15 | 236.65 | 38.78 | 87.95 | 126.73 |

16) **Interest on Working Capital:** OPTCL has estimated Rs.238.32 Cr towards Working Capital Requirement for FY 2017-18. Considering rate of interest @ 12.30% per annum, OPTCL estimated interest on working capital of **Rs.29.31 Cr.** and claimed 50% of of the same i.e. **Rs.14.66 Cr for FY 2017-18.**

17) **Rebate:** OPTCL has projected 2% rebate amounting to **Rs.20.27 Cr.** which is calculated based on the projected ARR for the FY 2017-18.

New Projects

18) OPTCL proposes to spend **Rs.1144.01 Cr.** during FY 2017-18 towards Capital Expenditure (CAPEX) on new projects in different streams of activities like O&M, Telecom, IT, Construction and Civil Works. The summary of proposed CAPEX under various wings is furnished in the **Table-5** below:

Table-5: Projected CAPEX for new projects - FY 2017-18

| Particulars | Amount (Rs. Cr.) |
|--|------------------|
| (i) Telecom Wing | 82.32 |
| (ii) Existing Assets (O&M Wing) | 112.32 |
| (iii) Information Technology (IT Wing) | 30.61 |
| (iv) Civil Wing | 52.30 |
| (v) New Transmission Projects (Construction Wing) | 866.46 |
| Total Capital Expenditure [(i)+(ii)+(iii)+(iv)+(v)] | 1144.01 |

19) **CAPEX for telecom related projects:** Pertaining to CAPEX of Telecommunication Wing, OPTCL proposed of **Rs. 82.32 Cr** for FY 2017-18 and the details of which are shown in the **Table-6** below:

Table -6 CAPEX - Telecom Projects - FY 2017-18

| Item | Amount (Rs. Cr.) |
|---|------------------|
| SCADA interface points at vital 132kV s/s by laying OPGW cable (1745 km.) | 38.00 |
| Laying OPGW to balance 132/220/400kV s/s of OPTCL (6589 km.) | 19.07 |
| Infrastructure provision of SCADA for upcoming industries | 2.40 |
| Provision of Digital Tele-protection coupler in all 220kV lines | 2.50 |
| Provision of phase-wise replacement of old RTU | 3.10 |
| Phase-wise replacement of 8 core OPGW by 24 core OPGW | 10.70 |
| Installation of PMUs in all 220kV & above voltage level sub stations | 6.55 |
| Total | 82.32 |

- 20) **CAPEX for Existing Assets (O&M Wing):** To meet the future load growth an amount of **Rs. 112.32 Cr proposed** for CAPEX for O&M related projects for FY 2017-18 and the details are shown in the **Table-7** below.

Table-7 CAPEX Existing Assets – (O&M WING) - FY 2017-18

| Sl. No. | Description | Unit Rate (Lakh) | Quantity | Amount (Rs. Lakh) |
|--------------|---|------------------|----------|-------------------|
| 1 | PROCUREMENT OF TRANSFORMERS WITH COST OF ERECTION | | | |
| (i) | Procurement of 160 MVA, 220/132kV | 715.00 | 2 | 14.30 |
| (ii) | Procurement of 40 MVA, 132/33kV | 234.00 | 5 | 11.70 |
| (iii) | Procurement of 20 MVA, 220/33kV | 198.08 | 1 | 1.98 |
| (iv) | Procurement of 20 MVA, 132/33kV | 165.00 | 8 | 13.20 |
| (v) | Cost of construction of Bays with cost of Structures and Equipments | LS | | 18.20 |
| 2 | UPRATING OF CONDUCTOR WITH HTLS | | | |
| (i) | 132kV Chandaka - Nimapara line (56.28 RKM) | LS | | 52.94 |
| (ii) | 132kV Ranasinghpur - Kesura line (24.04 RKM) | | | |
| (iii) | 132kV Kesura - Nimapara line (42.55 RKM) | | | |
| TOTAL | | | | 112.32 |

- 21) **CAPEX for Information Technology (IT) related projects:** CAPEX for infrastructure development of IT and automation related fields etc., OPTCL proposed of **Rs. 30.61 Cr** for FY 2017-18 and the details of which are shown in the **Table-8** below:

Table-8 CAPEX - IT PROJECTS - FY 2017-18

| Sl.No. | Item Description | Amount (Rs. Cr.) |
|--------------|-----------------------------------|----------------------|
| 1 | Analytics (Business Intelligence) | 3.50 |
| 2 | Primary Data Center(PDC)/E-shakti | 10.00 |
| 3 | Disaster Recovery Data Center | 7.00 |
| 4 | End-User IT Systems | 3.00 |
| 5 | CCTV & VC | 5.06 |
| 6 | DMS | 0.05 |
| 7 | Smart Grid AMI | 2.00 |
| TOTAL | | Rs. 30.61 Cr. |

- 22) **CAPEX for civil works:** OPTCL proposed of **Rs. 52.30 Cr** for FY 2017-18 toward **civil** works relating to new upcoming projects and the details are shown in **Table-9** below.

Table-9 CAPEX - CIVIL WORKS PROJECTS - FY 2017-18

| Sl. No. | Description of works | Amount (Rs Cr.) |
|--------------|--|-----------------|
| 1 | Construction of approach road and related works | 4.00 |
| 2 | Construction of boundary wall and related works | 2.00 |
| 3 | Water supply and sewerage system and drainage related work | 0.50 |
| 4 | Construction of offices,staff quarters, stores | 10.00 |
| 5 | Construction of Tech Tower, Bhubaneswar | 20.00 |
| 6 | Construction of Data Centre, Bhubaneswar | 15.80 |
| TOTAL | | 52.30. |

23) **CAPEX for New Transmission Projects (construction wing):** OPTCL Submitted that, to increase the overall system capacity and to strengthen the transmission system network of the State, It has been planned to spend an amount of **Rs. 866.46 Cr** on transmission related infrastructure during FY 2017-18 and the details are shown in the **Table-10** below.

Table-10: CAPEX for New Transmission Projects (Construction Wing) FY 2017-18

| Sl. No. | Description of the Project/Scheme | Expenditure during FY 2016-17 | | | Projected Expenditure (FY 2017-18) |
|----------|--|-------------------------------|-----------------------------------|-------|------------------------------------|
| | | Actual For First Six Months | Projection For Balance Six Months | Total | |
| A | ONGOING SCHEME | | | | |
| 1 | 2 | 3 | 4 | 5=3+4 | 6 |
| 1 | 132/33kV Khajuriakata (Hindol Road) S/S with line | 1.37 | 3.00 | 4.37 | - |
| 2 | Diversion of 132kV Dhenkanal-Nuapatna line with 132kV Bay Extn. at Nuapatna S/S | - | 3.25 | 3.25 | - |
| 3 | 132/33kV Udala S/S with LILO | 0.22 | 4.50 | 4.72 | 20.00 |
| 4 | 132kV Bhadrak - Anandpur S/C line | 0.42 | 5.00 | 5.42 | 6.63 |
| 5 | 132/33kV Olaver S/S with line & Bay Extn. at Pattamundai | 2.00 | 5.00 | 7.00 | 2.00 |
| 6 | 132/33kV Agarpada S/S with LILO | 0.28 | 7.00 | 7.28 | 13.89 |
| 7 | 132/33kV Bhograi S/S with LILO | 6.34 | 6.00 | 12.34 | - |
| 8 | 132kV Baripada PGCIL (Kuchei)- Jaleswar D/C line & 2 nos. 132kV Bay Extn. | 2.71 | 2.34 | 5.05 | - |
| 9 | 220/132kV Puri (Samangara) S/S with line | 3.50 | 4.33 | 7.83 | - |
| 10 | 220/132kV Atri (Karadagadia) S/Swith line | 3.43 | 5.00 | 8.43 | - |
| 11 | 220/132kV Mendhasal S/S with line | 0.75 | 1.15 | 1.90 | - |
| 12 | 220/132/33kV Pratapsasan S/Swithline | 18.09 | 10.00 | 28.09 | 26.13 |
| 13 | 3rd ICT at 400/220kV Mendhasal S/S | 0.56 | 7.50 | 8.06 | 10.55 |
| 14 | 220kV Bidanasi-Cuttack D/C line | 2.27 | 2.00 | 4.27 | - |
| 15 | 220/132kV Cuttack (Nuapada) S/S & 220kV Bay Extns. at Bidanasi | 1.77 | 4.80 | 6.57 | - |
| 16 | 132/33kV Marshaghai S/S with LILO | 0.14 | 2.5 | 2.64 | - |
| 17 | 132kV Bay Extns. at Salipur&Kendrapara with lines | 0.01 | 1.00 | 1.01 | - |
| 18 | 132kV Nuapatna-Banki S/C line | 1.17 | 6.00 | 7.17 | 2.97 |
| 19 | 132/33kV R.Udayagiri S/Swith line & 132kV Bay Extn. at Mohana | 2.79 | 10.00 | 12.79 | 5.67 |
| 20 | Conversion of existing 132kV Balasure-Somathpur S/C line to D/C line & 132kV Bay Extns. | 0.07 | 0.05 | 0.12 | - |

| Sl. No. | Description of the Project/Scheme | Expenditure during FY 2016-17 | | | Projected Expenditure (FY 2017-18) |
|---------|---|-------------------------------|-----------------------------------|-------|------------------------------------|
| | | Actual For First Six Months | Projection For Balance Six Months | Total | |
| 21 | 220/33kV Narasinghpur S/S with LILO | 6.09 | 6.00 | 12.09 | 16.33 |
| 22 | 132/33kV Bangiriposhi S/S with line | 2.45 | 4.50 | 6.95 | 1.01 |
| 23 | 132/33kV Dhenkikote S/S with line | 4.69 | 8.50 | 13.19 | 16.87 |
| 24 | 132/33kV Brajabiharipur, Cuttack (old site CDA) S/S | - | 3.50 | 3.50 | 20.00 |
| 25 | 220/33kV BaligudaS/S with line | 3.02 | 15.00 | 18.02 | 45.00 |
| 26 | 132/33kV Satasankha(Puri) S/S with line | 0.26 | 7.00 | 7.26 | 25.00 |
| 27 | 132/33kV Tirtol S/S with line | 0.23 | 5.00 | 5.23 | 25.00 |
| 28 | 132/33kV ChikitiS/S withline | 1.03 | 6.50 | 7.53 | 25.00 |
| 29 | 132/33kV Betonati S/S with line | 3.49 | 7.50 | 10.99 | 5.02 |
| 30 | 220/132/33kV AskaS/S with line | 1.77 | 7.50 | 9.27 | 35.00 |
| 31 | 220/132/33kVChandaka-B (Bhubaneswar) GIS S/S | 40.9 | 33.14 | 74.04 | - |
| 32 | 220kV Atri-Pandiabil D/C line | 2.03 | - | 2.03 | - |
| 33 | 220/132/33kV GodaChhak S/S with line | 1.43 | 12.00 | 13.43 | 30.00 |
| 34 | 132/33kV Banki S/S with line | - | 0.50 | 0.50 | - |
| 35 | 132/33kV Unit-8 (Bhubaneswar)GIS S/S with line | - | 3.00 | 3.00 | 25.00 |
| 36 | 132/33kV Mancheswar GIS S/S with line | - | 3.00 | 3.00 | 25.00 |
| 37 | 132kV Phulbani-Boudh S/C line | - | 5.00 | 5.00 | 25.00 |
| 38 | 132/33kV Athagarh GIS S/S with line | 3.64 | 5.00 | 8.64 | 28.00 |
| 39 | 220/33kV KeonjharGIS S/S with line | 2.16 | 7.00 | 9.16 | 35.00 |
| 40 | 132/33kV ChandbaliGIS S/S with line | - | 5.00 | 5.00 | 25.00 |
| 41 | 220kV Pandiabil - Pratapsasan D/C line | 1.88 | 5.00 | 6.88 | 20.00 |
| 42 | Other works | 9.29 | 2.50 | 11.79 | 2.50 |
| 43 | 220/33kVKasipurS/S with line | 8.55 | 10.49 | 19.04 | - |
| 44 | 220/132kV Jayapatna S/S with line | 4.04 | 10.00 | 14.04 | 63.45 |
| 45 | 132/33kV Muniguda S/S with line | 3.45 | 14.94 | 18.39 | - |
| 46 | Diversion of 220kVIndravati-Theruvalli(Ckt-III & IV) D/C line atLoc. No. 64 | - | 0.20 | 0.20 | - |
| 47 | Tfr. bay at 220/33kV LaxmipurS/S | - | 1.52 | 1.52 | - |
| 48 | 220/132/33kV Gunupur S/S with LILO | 0.05 | - | 0.05 | 9.57 |
| 49 | 132/33kV PottangiS/S with line | 2.33 | 2.22 | 4.55 | - |
| 50 | 132/33kV UmerkoteS/S with line | 0.09 | 0.02 | 0.11 | - |
| 51 | 132/33kV Dabugaon S/S with line | - | 0.40 | 0.40 | - |
| 52 | 132/33kV PodagadaS/Swith line | 1.02 | 2.00 | 3.02 | - |
| 53 | 220kV Jayanagar-PGCIL D/C line with 2 nos. 220kV feeder bays | 0.53 | 8.00 | 8.53 | - |
| 54 | Conversion of existing Jaynagar-Sunabeda S/C line to D/C line | 0.47 | 2.00 | 2.47 | - |

| Sl. No. | Description of the Project/Scheme | Expenditure during FY 2016-17 | | | Projected Expenditure (FY 2017-18) |
|----------|--|-------------------------------|-----------------------------------|---------------|------------------------------------|
| | | Actual For First Six Months | Projection For Balance Six Months | Total | |
| 55 | 220/33kV Malkanagiri S/S with line | 15.03 | 9.00 | 24.03 | - |
| 56 | 132/33kV Boriguma S/S with LILO | 4.36 | 3.00 | 7.36 | - |
| 57 | 220/33kV Kalimela S/S with line | 2.47 | 5.00 | 7.47 | 7.00 |
| 58 | 132kV Jayanagar-Tentulikhunti S/C line | 0.30 | 5.00 | 5.30 | 6.00 |
| 59 | 132kV Podagada-Pottangi S/C line | - | 0.10 | 0.10 | 1.00 |
| 60 | 220/132kV Kesinga S/S with line | 0.91 | 20.00 | 20.91 | - |
| 61 | 220/132/33kV Baragarh(New) S/S | 2.98 | 10.00 | 12.98 | - |
| 62 | 132/33kV Kantabanji S/S with line | 1.36 | 17.00 | 18.36 | - |
| 63 | 132/33kV Ghens S/S with line | 4.22 | 23.00 | 27.22 | 3.00 |
| 64 | 132/33kV Tusura S/S with line | 5.95 | 18.00 | 23.95 | 2.00 |
| 65 | 132/33kV Biramaharajapur S/S with line | 4.96 | 10.00 | 14.96 | - |
| 66 | 132kV Junagarh-Kesinga D/C line | 3.10 | 12.00 | 15.10 | 10.00 |
| 67 | 132kV Kesinga-Khariar line | - | - | - | 5.00 |
| 68 | 132kV Nuapada-Padampur line | 6.46 | 5.00 | 11.46 | - |
| 69 | 400/220kV Lapanga S/S with LILO | 11.27 | 38.73 | 50.00 | 35.00 |
| 70 | 220/132/33kV Lapanga S/S with LILO | 2.26 | 0.74 | 3.00 | - |
| 71 | 220/132/33kV Kuanrunda S/S with LILO. | 0.26 | 1.00 | 1.26 | 15.00 |
| 72 | Conversion of 132/11kV S/S to 2x40MVA, 132/33kV S/S Sarasmall(Jharsuguda) | 1.35 | 1.00 | 2.35 | - |
| 73 | 400kV IB-Meramundali D/C Line | 0.02 | - | 0.02 | - |
| 74 | 132kV Lapanga-Remja D/C line | - | 2.00 | 2.00 | 3.00 |
| 75 | 132/33kV Kuchinda S/S with line | 0.12 | - | 0.12 | - |
| 76 | 220/33kV Bonai S/S with line | 3.75 | 2.25 | 6.00 | - |
| 77 | 132/33kV Kalunga S/S with line | - | 1.00 | 1.00 | - |
| 78 | 220kV LILO to Bonai | - | 1.00 | 1.00 | - |
| 79 | Restoration of 400kV IB-Meramundali DC line from Loc. No. 124/2 to Loc. No. 149/0. | 12.78 | 8.22 | 21.00 | - |
| | TOTAL - A | 236.67 | 487.39 | 724.06 | 677.59 |
| B | NEW PROJECTS | | | | |
| 1 | 400/220kV Meramundali- B GIS S/S with line | - | - | - | 30.00 |
| 2 | 132/33kV Rajnagar S/S with line | - | - | - | 7.00 |
| 3 | 220/33kV Dasapalla S/S with line | - | - | - | 7.00 |
| 4 | 132kV Kuchei-Baripada D/C line | - | - | - | 3.00 |
| 5 | 220/132/33kV Dhamra S/S with line (Revival) | - | - | - | 7.00 |
| 6 | 132kV Dhamra-Chandbali D/C line | - | - | - | 3.00 |
| 7 | 220/33kV Telkoi S/S with line | - | - | - | 4.00 |

| Sl. No. | Description of the Project/Scheme | Expenditure during FY 2016-17 | | | Projected Expenditure (FY 2017-18) |
|----------|--|-------------------------------|-----------------------------------|---------------|------------------------------------|
| | | Actual For First Six Months | Projection For Balance Six Months | Total | |
| 8 | 132kV Aska-Digapahandi D/C line | - | - | - | 3.00 |
| 9 | 220kV Paradeep-Pratapsasan D/C line | - | - | - | 7.00 |
| 10 | 220kV Narendrapur-Aska D/C line | - | - | - | 4.00 |
| 11 | 220kV LILO to Kashipur | - | 3.84 | 3.84 | 3.16 |
| 12 | 132/33kV Thuapalli S/S with line | - | 5.00 | 5.00 | 15.00 |
| 13 | 132/33kV Bhatli S/S with line | - | 0.20 | 0.20 | 5.00 |
| 14 | 132/33kV Binka S/S with line | - | 0.20 | 0.20 | 5.00 |
| 15 | 132/33kV S/S at M.Rampur with line | - | 0.20 | 0.20 | 5.00 |
| 16 | 132/33kV Sindekala S/S with line | - | 0.20 | 0.20 | 5.00 |
| 17 | 132/33kV Lakhanpur (Belpahar) S/S with line | 0.97 | 1.00 | 1.97 | 5.00 |
| 18 | 220/33kV Lephripada (Sundergarh) S/S with line | 0.34 | 1.00 | 1.34 | 5.00 |
| 19 | 220/33kV Deogarh S/S with line | - | 1.00 | 1.00 | 5.00 |
| 20 | 132/33kV Maneswar S/S with line | - | 1.00 | 1.00 | 5.00 |
| 21 | 220/33kV Govindpalli S/S with line | 0.14 | 0.50 | 0.64 | 7.00 |
| 22 | 220/33kV Thuamularampur S/S with line. | 0.05 | 0.10 | 0.15 | 3.85 |
| | TOTAL - B | 1.50 | 14.24 | 15.74 | 144.00 |
| | TOTAL = A+B | 238.17 | 501.63 | 739.80 | 821.59 |
| C | DEPOSIT WORK | | | | |
| 1 | EHT line diversion for Haridaspur-Paradeep Rly. line | 0.92 | 0.05 | 0.97 | - |
| 2 | 132/33kV Shamuka Beach (Puri) S/S with LILO | 0.23 | - | 0.23 | - |
| 3 | 132/33kV Arugul S/S with line | 2.30 | 0.05 | 2.35 | - |
| 4 | 220/33kV Infocity-II GIS S/S with line | 5.33 | 5.00 | 10.33 | - |
| 5 | 132/33kV Mania (Tangi) S/S | 1.72 | 3.00 | 4.72 | - |
| 6 | RTSS at Boinda | 2.18 | 2.00 | 4.18 | - |
| 7 | RTSS at Talcher Road | 0.74 | 1.26 | 2.00 | - |
| 8 | RTSS at Malatipatapur | - | 0.80 | 0.80 | 3.60 |
| 9 | RTSS at Kendrapara | - | 0.50 | 0.50 | 1.50 |
| 10 | RTSS at Kamakhyanagar | - | 0.50 | 0.50 | 1.50 |
| 11 | RTSS at Rairakhola | 1.56 | 2.50 | 4.06 | - |
| 12 | RTSS at Bisamcuttack | 1.26 | 2.00 | 3.26 | 0.12 |
| 13 | RTSS at Rayagada | 0.78 | 0.30 | 1.08 | - |
| 14 | RTSS at Tikiri | 0.08 | 0.92 | 1.00 | 1.69 |
| 15 | RTSS at Bhalumaska | 0.07 | 2.43 | 2.50 | 18.86 |
| 16 | RTSS at Lanjigarh | 5.96 | 8.04 | 14.00 | 0.60 |
| 17 | RTSS at Kesinga | 1.68 | 3.00 | 4.68 | - |
| 18 | RTSS at Kantabanji | 0.82 | 3.00 | 3.82 | - |
| 19 | RTSS at Nuapada | 1.28 | 3.00 | 4.28 | - |

| Sl. No. | Description of the Project/Scheme | Expenditure during FY 2016-17 | | | Projected Expenditure (FY 2017-18) |
|---------|--|-------------------------------|-----------------------------------|---------------|------------------------------------|
| | | Actual For First Six Months | Projection For Balance Six Months | Total | |
| 20 | RTSS at Dunguripali | - | 2.00 | 2.00 | 3.00 |
| 21 | RTSS at Deogaon | - | 2.00 | 2.00 | 3.00 |
| 22 | RTSS at Godbhaga | - | 2.00 | 2.00 | 3.00 |
| 23 | RTSS at Bimalagarh | 0.17 | 3.30 | 3.47 | - |
| 24 | RTSS at Belpahar | 0.20 | 1.50 | 1.70 | - |
| 25 | 220kV Budhipadar-Basundhara SC line & 220kV S/S at Basundhara | 0.44 | - | 0.44 | - |
| 26 | Diversion of 132kV Jharsuguda-Ultratech cement line | 0.02 | - | 0.02 | - |
| 27 | Diversion of 132kV Sambalpur-Rajgangpur S/C line | 0.01 | - | 0.01 | - |
| 28 | RTSS at Belpahar | 0.10 | 1.00 | 1.10 | - |
| 29 | Diversion of 132kV Rajgangpur-Rourkela S/C Line for NH crossing | 0.06 | - | 0.06 | - |
| 30 | RTSS at kechhobahal | 1.63 | 3.00 | 4.63 | 3.00 |
| 31 | RTSS at Rengali | 0.86 | 2.50 | 3.36 | 3.00 |
| 32 | RTSS at Maneswar | - | 1.00 | 1.00 | 2.00 |
| | TOTAL - C | 30.40 | 56.66 | 87.05 | 44.87 |
| | TOTAL - D = A+B+C | 268.57 | 558.29 | 826.85 | 866.46 |

Depreciation

- 24) OPTCL submitted that, The book value of the assets at the beginning of the FY 2017-18 will be **Rs.5597.60 Cr.** (Rs.4242.07 Cr. as on 01.04.16 + Rs.1355.53 Cr.: projected addition during FY 2016-17). For 2017-18, Depreciation is estimated as **Rs.192.59 Cr.** which includes Rs.0.66 Cr. towards cost of premium/rent on leasehold land. OPTCL prays the Hon'ble Commission to allow **Rs. 192.59 Cr** towards depreciation in the ARR for FY 2017-18 in order to enable OPTCL to repay the loan availed for CAPEX in time

Return on Equity

- 25) 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. 410.07 Cr** (as per the Provisional Account) as on 31.03.2016.
- 26) Government of Odisha has committed to provide funds of Rs. 300 Cr. as equity over the five year period FY 2011-16 i.e. Rs. 60 Cr. annually. Till date OPTCL has received Rs. 400.00Cr

from Govt. of Odisha. Accordingly, OPTCL proposes of Rs. **62.00 Cr** towards Return on Equity (RoE) @ 15.5% on Rs. 400.00 Cr. (Rs. 460.07 Cr - Rs. 60.07 Cr) for FY 2017-18.

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. The Hon'ble Commission in the ARR of 2016-17, vide para 239, has allowed the actual tax expenses Rs.7.79 Cr. booked in the audited accounts for FY 2014-15 which is also claimed by OPTCL in the ARR. OPTCL has projected **Rs. 8.15 Cr.** for the FY 2015-16 towards Income Tax under section 115JB of Income Tax Act, 1961. Accordingly OPTCL proposed same amount of **Rs. 8.15 Cr** for the FY 2017-18 under this head.

TRANSMISSION COST

28) Considering the proposed cost / expenses under different heads, OPTCL estimated Transmission Cost of **Rs.1034.28** for FY 2017-18 . Details are shown in the **Table-11** below:

Table-11 Transmission Cost FOR FY 2017-18

| Particulars | Amount (Rs. Cr.) |
|--|-------------------------|
| Employee Cost including Terminal Benefits | 462.33 |
| R&M Cost | 155.11 |
| A&G Cost | 26.11 |
| Expenses related to auxiliary energy consumption | 3.55 |
| Other miscellaneous expenses, statutory levies and taxes(GCC& CSR) | 1.56 |
| Sub-Total (O&M Cost) | 648.65 |
| Interest on Loan Capital | 87.95 |
| Interest on Working Capital | 14.66 |
| Rebate | 20.27 |
| Sub- Total (Interest & Financial Cost) | 122.88 |
| Depreciation | 192.59 |
| Return on Equity | 62.00 |
| Income Tax | 8.15 |
| Total | 1034.28 |

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 Transmission System Availability Factor (TAFY) for the year 2015-16 as **99.96%**. The computation and the TAFY figure have been verified and certified by SLDC.

In accordance with the formula prescribed in Regulation 6.5, OPTCL has worked out incentive of **Rs. 9.35 Cr.** towards system availability for the year 2015-16 using approved ARR figure of Rs. 630.94 Cr. for the said year. Hence, OPTCL proposes **Rs. 9.35 Cr** towards Incentive for System Availability to be allowed in the ARR for FY 2017-18.

Other income and cost / Miscellaneous receipt:

30) During 1st six months of FY 2016-17, miscellaneous receipt of OPTCL from different sources is about **Rs. 14.83 Cr.**

Current status on revenue earnings from Inter-State Wheeling:

31) As per the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 CTU (PGCIL) will collect the transmission charges from the interstate customers paid to OPTCL. In this regard, tariff so determined by CERC would be paid to OPTCL by CTU. Further, OPTCL has filed one petition before CERC for determination of Transmission Tariff for the 220kV Rourkela- Tarkera- Budhipadar-Korba (Odisha portion) corridor for the period 01.04.2014 to 31.03.2019. Same is yet to be heard. Hence, revenue from inter-state wheeling during FY 2017-18 cannot be correctly assessed. In the meantime OPTCL has signed the Transmission Service Agreement (TSA) and Revenue Sharing Agreement (RSA) with PGCIL under PoC Regulations and disbursement has been started. For 1st six month of FY 2016-17, only **Rs. 1.85 Cr.** has been received towards inter-state wheeling charges including wheeling of 5 MW power share of Chhatishgarh from Hirakud Power System from CSPDCL

Current status on revenue earnings from Supervision Charge:

32) In line with the trend of revenue earning during FY 2016-17, OPTCL expects the miscellaneous receipt of **Rs. 30.00 Cr** during FY 2017-18. The summary of Aggregate Revenue Requirement of OPTCL for FY 2017-18 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 2017-18

| ITEMS | Proposal for OPTCL FY 2017-18 | |
|--|----------------------------------|---------------|
| A) FIXED COST | | |
| 1. O&M Expenses | | 648.65 |
| (i) Employees Cost including Terminal Benefits | 462.33 | |
| (ii) A&G Cost | 26.11 | |
| (iii) R&M Cost | 155.11 | |
| (iv) Expenses related to auxiliary energy consumption | 3.55 | |
| (v) Other misc. expenses, statutory levies and taxes(GCC+ CSR) | 1.56 | |
| 2. Interest & Financial Charges | | 122.88 |
| (i) Interest on Loan Capital | 87.95 | |
| (ii) Interest on Working Capital | 14.66 | |
| (iii) Rebate | 20.27 | |

| | | |
|---|--|----------------|
| 3. Depreciation | | 192.59 |
| 4. Return on Equity | | 62.00 |
| 5. Income Tax | | 8.15 |
| Sub-Total (A) | | 1034.28 |
| B) Others | | |
| Incentive for system availability | | 9.35 |
| Total Trans. Cost (A+B) | | 1043.63 |
| C) Less Misc. Receipts | | 30.00 |
| D)ARR to be recovered from LTOA Customers i.e. OPTCL's Aggregate Revenue Requirement | | 1013.63 |

Transmission loss:

33) The actual transmission loss in the OPTCL's transmission system from April'16 to September'16 is **3.58%** against Commission's approval of 3.70% for FY 2016-17. The Hon'ble Commission at Para 27 (page 11) of the revised Business Plan order dated 30.07.2016 (Case No. 05/2016) has approved transmission loss of 3.50% for FY 2017-18. OPTCL expects the loss level to remain around 3.60% in the current year. Accordingly, OPTCL proposes **3.50%** transmission loss during FY 2017-18.

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

OPTCL in the present application has taken the recent realistic demand projection of all four DISCOMs plus Railways totalling 25877 MU for FY 2017-18. OPTCL envisages 150 MU of energy to be transacted in DISCOMs 33kV & 11 kV network for which OPTCL is not entitled to receive any transmission charge as per Commission's order. Hence, total MU to be transmitted in OPTCL network gets reduced to 25727 MU (25877-150) from the total demand projection of DISCOMs and Railways. The revenue to be earned by OPTCL from wheeling of **26282 MU** (25727 of DISCOMs and Railways + 550 of wheeling surplus power of LTOA consumers like IMFA & NALCO + 5 for supply of emergency and backup power to LTOA like IMFA & NALCO) at the existing transmission tariff of 25 P/U will be **Rs. 657.05 Cr.**

Excess/Deficit of Revenue Requirement:

34) OPTCL will be having revenue deficit of **Rs. 356.58 Cr** considering the ARR proposed and the revenue to be earned from wheeling of **26282 MU** 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 2017-18

| Deficit of Revenue requirement @ 25 P/U present tariff rate (Rs. Cr.) | |
|---|----------------|
| Total Aggregate Revenue Requirement | 1013.63 |
| Less: Revenue earned from Long Term Open Access Customer | 657.05 |
| Deficit of Revenue requirement for FY 2017-18at the existing Rate @ 25 P/U | -356.58 |

Proposal for revision of Transmission Tariff/ Wheeling Charges

- 35) OPTCL, with its present transmission tariff, cannot meet its proposed revenue requirement at the existing transmission tariff of 25 P/U. OPTCL submits the proposed ARR, Transmission Tariff and Transmission Loss for FY 2017-18 to be effected from 01.04.2017.

Open Access charges:

- 36) The table below shows the open access charges proposed by OPTCL for FY 2017-18

Table-13 Abstract of OA Charges Proposed By OPTCL For FY 2017-18

| DETAILS | Rs. Per Unit approach |
|---|-----------------------|
| Net Aggregate Revenue Requirement (Rs. Cr.) | 1013.63 |
| Proposed Energy to be transmitted in OPTCL Network (MU) | 26282 |
| Proposed Transmission Tariff (P/U) | 38.57 |
| Power Flow (Equivalent of 26282MU) in MWs | 3000 |
| Long term Open Access Charges in terms of Rs./MW/Day | 9256 |
| Short term Open Access Charges in terms of Rs./MW/Day | 2314 |

Reactive energy charges

- 37) OPTCL is in the process of finalization of application for determination of Reactive Energy Charges for FY 2016-17 and the same will be filed before the Hon'ble Commission very shortly. The charges have been worked out as **3 paise/KVARh** based on the investment of Rs. 8.9224 Cr. made by OPTCL for procurement and installation of 275 MVAR Capacitor Banks at 20 grid sub-stations (commissioned at 18 S/S and to be commissioned by Dec-2016 at balance 2 S/S). Since during FY 2017-18, there is no plan to install Capacitor Banks at any other grid S/S, OPTCL proposes that **3 paise/KVARh** may be approved provisionally as Reactive Energy Charges FY 2017-18.

ADDITIONAL SUBMISSIONS TO BE CONSIDERED IN THE PRESENT APPLICATION

Equating LTOA and STOA charges and introduction of MTOA regime:

- 38) As per existing OERC Regulations, STOA customers are liable to pay 25% of the long term transmission charge. Hon'ble Commission may kindly consider to equate long term and short term rates to enable OPTCL to earn more revenue which would be accounted for under Miscellaneous Receipt so as to relieve the long term open access customers resulting downward effect on Retail Supply Tariff. Further, in line with CERC regulations MTOA regime may be introduced in Odisha to have compatibility in inter-state and intra-state Open Access Regulations.

Additional Charges from ECoR:

39) Energy meter data from the power drawal points have to be collected on weekly basis by deploying additional manpower. Hence, OPTCL proposes to collect **10 P/U** for the said purpose. Besides drawing unbalanced power, drawal of ECoR will also generate harmonics which shall be absorbed by the OPTCL system. Hence, OPTCL proposes to collect **15 P/U** towards compensation.

Hon'ble Commission may approve the proposed charges in the present transmission tariff application to be additionally collected from Railways in FY 2017-18

Introduction of Reliability Support Charge for Connectivity

40) Presently 39 nos. CGPs with total installed capacity of 9460MW are connected to OPTCL system. They are availing start-up/emergency power and accordingly pay the monthly charges as approved by the Hon'ble Commission. But they do not pay any amount to OPTCL availing reliability support of the grid.

In this regard, OPTCL proposes **Rs. 1 lakh/MW/annum** to be levied on the installed capacity of the CGP for 10 years. The amount so collected from CGPs would be utilised for upstream EHT system upgradation with a view to provide and sustain most reliable services to the CGPs. The expected revenue earning under this head would be about **Rs.95 Crore** and this amount would cross subsidize the long-term users of the transmission system.

Proposed Schedule of Transmission Charge of OPTCL for FY 2017-18

Transmission Charge:

41) Transmission Charge @ **38.57 P/U** shall be applicable for transmission of power at 400kV/220kV/132kV over OPTCL's EHT transmission system for the purpose of transmission of energy from generator end to the sub-station from where energy will be fed to DISCOMs, Railways and CGPs.

Transmission Loss @**3.50%** 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.

Rebate:

42) 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:

43) 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:

44) 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

OPTCL's proposal for FY 2017-18 are:

1. Aggregate Revenue Requirement of **Rs.1013.63 Cr.**
2. Recovery of Transmission Charge @ **38.57 P/U.**
3. Transmission Loss for wheeling as **3.50%** on energy drawl
