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ODISHA ELECTRICITY REGULATORY COMMISSION
UNIT - VIII, BHUBANESWAR - 751012

NOTIFICATION

The 21st October, 2014

No. 1432—OERC-RA-AMEND.-REGU.-8/2013-Vol.-III— In exercise of powers conferred under Sections 61, 62 and 86; read with Section 181 of the Electricity Act, 2003 (Act 36 of 2003) and all other powers enabling it in that behalf, the Odisha Electricity Regulatory Commission hereby makes the following Regulations, namely:—

1. SHORT TITLE AND COMMENCEMENT

- 1.1 These Regulations shall be called "Odisha Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2014".
- 1.2 These Regulations shall extend to the whole of the State of Odisha.
- 1.3 The Commission in specifying these Regulations shall be guided by the principles contained in Sections 61 and 62 of the Act to encourage competition, efficiency, economical use of resources, good performance and optimum investments.
- 1.4 The Regulation shall however, not apply in the case where tariff has been determined through a transparent process of bidding in accordance with the guidelines issued by the Central Government as per the provisions of Section 63 of the Act.
- 1.5 These Regulations shall come into force on the date of publication in the Official Gazette.
- 1.6 The Odisha General Clauses Act, 1937 shall apply to the interpretation of these Regulations.
- 1.7 These Regulations shall supersede the OERC (Terms & Conditions for Determination of Tariff) Regulations, 2004

2. DEFINITIONS AND INTERPRETATION

2.1 In these Regulations, unless the context otherwise requires:—

- (a) "Act" means the Electricity Act, 2003 (36 of 2003);
- (b) "Aggregate Revenue Requirement" or "ARR" means for each Financial Year, the costs pertaining to the Licensed business which are permitted, in accordance with these Regulations, to be recovered from the tariffs and other charges determined by the Commission;

- (c) **“Additional Capitalisation”** means the capital expenditure incurred or projected to be incurred, after the date of commercial operation of the project and admitted by the Commission after prudence check, subject to provisions of Regulation 4.18 and 4.19;
- (d) **“Allotted Transmission Capacity”** means and include the power transfer in MW between the specified point(s) of injection and point(s) of drawal allowed to a long-term customer on the intra-State transmission system under the normal circumstances and the expression “allotment of capacity” shall be construed accordingly;
- Allotted Transmission Capacity to a Long Term Transmission Customer shall be sum of the generating capacities allocated to the Long Term Transmission Customer from the State Generating Stations and Inter State Generating Stations and the contracted power, if any;
- (e) **“Availability”** in relation to a transmission system for a given period means the time in hours during that period in which the transmission system is capable to transmit electricity at its Rated Voltage and shall be expressed in percentage of total hours in the given period, and shall be calculated as directed by the Commission;
- (f) **“Auditor”** means an auditor appointed by the transmission company, in accordance with the provisions of Sections 224, 233B and 619 of the Companies Act, 1956 (1 of 1956), as amended from time to time or Chapter X of the Companies Act, 2013 (18 of 2013) or any other law for the time being in force;
- (g) **“Base Year”** means the Financial Year immediately preceding first year of the applicable Control Period;
- (h) **“Beneficiary”** means both Long Term Transmission Customers and Long Term Open Access Customers. A Distribution Licensee shall necessarily be a Long Term Transmission Customer for which it shall be required to enter into a Transmission Services Agreement with the Transmission Licensee;
- (i) **“Change in Law”** means occurrence of any of the following events:
- (i) the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal of any law; or
 - (ii) change in interpretation of any law by a competent Court, Tribunal or Indian Governmental Instrumentality which is the final authority under law for such interpretation; or
 - (iii) change by any competent statutory authority, in any consent, approval or licence available or granted for the project.

- (j) **"Commission"** means the Odisha Electricity Regulatory Commission referred to in sub-section (1) of the Section 82 of the Act;
- (k) **"Control Period"** means a multi-year time period fixed by the Commission, from time to time. The 1st Control Period under these Regulations is from 1st April 2014 up to 31st March 2019;
- (l) **"Cut-off Date"** means 31st March of the year closing after two years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of a year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation;
- (m) **"Date of Commercial Operation" or "COD"** means
in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:

Provided that:

- (i) where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable.
- (ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof.
- (iii) Date of Commercial Operation in relation to a communication system or element thereof shall mean the date declared by the transmission licensee from 0000 hour of which a communication system or element is put into service after completion of site acceptance test including transfer of voice and data to respective control centre as certified by the State Load Dispatch Centre.
- (n) **"Day"** means a calendar day consisting of 24 hours period starting at 0000 hour;
- (o) **"Existing Project"** means the project declared under commercial operation from a date prior to 01-04-2014;

- (p) **"Expenditure Incurred"** means the fund, whether the equity or debt or both, actually deployed and paid in cash or cash equivalent, for creation or acquisition of a useful asset and does not include commitments or liabilities for which no payment has been released;
- (q) **"Financial Statement"** means for each financial year, the following statements, namely:—
- (i) balance sheet, prepared in accordance with the form contained in Part I of Schedule III to the Companies Act, 2013 as amended from time to time;
 - (ii) profit and loss account, complying with the requirements contained in Part II of Schedule III to the Companies Act, 2013;
 - (iii) cash flow statement, prepared in accordance with the Accounting Standard on Cash Flow Statement (AS-3) of the Institute of Chartered Accountants of India;
 - (iv) report of the statutory auditors;
 - (v) cost records prescribed by the Central Government under Section 148 of the Companies Act, 2013;
 - (vi) together with notes thereto, and such other supporting statements and information as the Commission may direct from time to time:

Provided further that the Commission may, from time to time, specify regulatory accounts to be maintained by a local authority under the Act.

- (r) **"Financial Year"** means a period commencing on 1st April of a calendar year and ending on 31st March of the subsequent calendar year;
- (s) **'Force Majeure'** for the purpose of these regulations means the event or circumstance or combination of events or circumstances including those stated below which partly or fully prevents the transmission licensee to complete the project within the time specified in the Investment Approval, and only if such events or circumstances are not within the control the transmission licensee and could not have been avoided, had the transmission licensee taken reasonable care or complied with prudent utility practices:
- a) Act of God including lightning, drought, fire and explosion, earthquake, volcanic eruption, landslide, flood, cyclone, typhoon, tornado, geological surprises, or exceptionally adverse weather conditions which are in excess of the statistical measures for the last hundred years; or
 - b) Any act of war, invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action; or
 - c) Industrywide strikes and labour disturbances having a nationwide impact in India;

- (f) **"GRIDCO"** means GRIDCO Limited;
- (u) **"Grid Code"** means the Odisha Grid Code (OGC) Regulations, 2006 as amended from time to time or subsequent re-enactment thereof;
- (v) **"Implementation Agreement"** means the agreement, contract or memorandum of understanding, or any such covenant, entered into (i) between transmission licensee and generating station or (ii) between transmission licensee and developer of the associated transmission system for the execution of project in co-ordinated manner;
- (w) **"Investment Approval"** means approval by the Board of the transmission licensee or any other competent authority conveying administrative sanction for the project including funding of the project and the timeline for the implementation of the project. Provided that the date of Investment Approval shall reckon from the date of the resolution/minutes of the Board/approval by competent authority.
- (x) **"Licensed Business"** shall mean the functions and activities, which the Licensee is required to undertake in terms of the Licence granted or being a deemed Licensee under the Act;
- (y) **"Licensee"** means a person who has been granted a Licence and shall include a deemed Licensee;
- (z) **"Long-Term Transmission Customer"** means a person having a long term transmission service agreement with the transmission licensee including deemed transmission licensee for use of intra-State transmission system by paying transmission charges.
- (aa) **"Other Business"** means other businesses of the Transmission Licensee under Section 41 of the Electricity Act 2003;
- (bb) **"Open Access Customer"** means a consumer eligible to receive supply of electricity from a person, other than Distribution Licensee of his area of supply, and the expression also includes a generating company and a Licensee, who has availed of or intends to avail of open access;
- (cc) **"Operation and Maintenance Expenses"** or **"O&M expenses"** means the expenditure incurred on operation and maintenance of the project, or part thereof, and also includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads;
- (dd) **"Original Project Cost"** means the capital expenditure incurred by the transmission company, within the original scope of the project up to the cut-off date as admitted by the Commission;
- (ee) **"Prudence Check"** means scrutiny of reasonableness of capital expenditure incurred or proposed to be incurred, financing plan, use of efficient technology, cost and time overrun and such other factors as may be considered appropriate by the

- Commission for determination of tariff. While carrying out the Prudence Check, the Commission shall look into whether the transmission licensee has been careful in its judgments and decisions for executing the project or has been careful and vigilant in executing the project;
- (ff) **"Rated Voltage"** means the manufacturer's design voltage at which the transmission system is designed to operate and also includes such lower voltage at which any transmission line is charged or for the time being charged, in consultation with long-term transmission customers;
- (gg) **"State Load Despatch Centre" or "SLDC"** means the centre established by the State Government for purposes of exercising the powers and discharging the functions under Section 31 of the Act;
- (hh) **"Transmission Business"** means the business of transmission of electricity by a Transmission Licensee to a Beneficiary/(ies) and permitted open access customers;
- (ii) **"Transmission Service Agreement"** means the agreement, contract, memorandum of understanding, or any such covenant, entered into between the transmission licensee and the Long-Term Transmission Customer(s) for the operation phase of Transmission System;
- (ij) **"Transmission System"** means the system consisting mainly of extra high voltage electric lines and associated equipment and substations having design voltage higher than 66 KV including any other system of lower voltage as the Transfer Scheme or the Commission may specifically recognize, owned or controlled by the Transmission Licensee, and used for the purposes of the transportation of electricity between the switchyards of two Generating Stations or from the switchyard of a Generating Station to a substation, or between substations, or to or from any external interconnection and includes all bays/equipment up to the interconnection with the Distribution System, and any plant, apparatus and meters owned or used in connection with the transmission of electricity, but shall not include any part of a Distribution System.
- (kk) **"Transmission System Availability Factor"** means Availability of the Transmission System as certified by the State Load Dispatch Centre;
- (ll) **"Useful life"** in relation to transmission system from the COD shall mean the following, namely:
- (i) AC Sub-station: 25 years
 - (ii) Gas Insulated Substation (GIS): 25 years
 - (iii) Transmission line (including HVAC) : 35 years
 - (iv) Communication system: 15 years

Provided that the useful life for AC Substations and GIS for which Notice Inviting Tender is floated on or after 01-04-2014 shall be considered as 35 years:

Provided further that the extension of life of the projects beyond the completion of their useful life shall be decided by the Commission on an application of the licensee;

(mm) "Year" means a financial year.

- 2.2 The words and expressions used in these regulations and not defined herein but defined in the Act or any other regulation of the Commission, shall have the meaning assigned to them under the Act or any other regulation of the Commission.
- 2.3 All proceedings under these Regulations shall be governed by the OERC (Conduct of Business) Regulations, 2004 as amended from time to time.
- 3. SCOPE OF REGULATIONS AND EXTENT OF APPLICATION**
- 3.1 The Commission shall be guided by the nine principles as laid down in Section 61(a) to 61(i) of the Act, while determining the Transmission tariff.
- 3.2 Where tariff has been determined through the process of bidding in accordance with the guidelines issued by the Central Government as per the provisions of Section 63 of the Act, the Commission shall adopt such tariff in accordance with the provisions of the Act.
- 3.3 In accordance with the principles laid out in these Regulations, the Commission shall determine the Aggregate Revenue Requirement (ARR) for the Transmission Business.
- 3.4 These Regulations shall apply to all the Transmission Licensees in the State of Odisha.

4. BUSINESS PLAN

- 4.1 The Transmission Licensee shall file for the Commission's approval, not less than 120 days before the commencement of the first year of the Control Period or such other date as may be directed by the Commission, a Long-Term Business Plan prepared in accordance with these regulations. The Business Plan shall be for the entire Control Period and shall, *inter alia*, contain.
- (a) Forecast of energy wheeled for each year of the Business Plan based on the Power Procurement Plan of the distribution licensees and transmission loss for each such year.
 - (b) Transmission loss reduction trajectory for each year of the Business Plan;
 - (c) Trajectory for the achievement of quality targets set by the commission from time to time.
 - (d) Schemewise Capital Investment Plan with details of
 - (i) The appropriate capital structure and cost of financing (interest on debt) and return on equity, terms of the existing loan agreements, etc;
 - (ii) Purpose of investment (i.e. replacement of existing assets, meeting load growth, technical loss reduction, meeting reactive energy requirements, improvement in quality and reliability of supply, etc) ;

- (iii) Capitalization Schedule;
 - (iv) Financing Plan;
 - (v) Cost-benefit analysis;
 - (vi) Performance improvement envisaged in the Control Period.
- (e) The Operation and Maintenance (O&M) costs estimated for the Base Year and two years prior to the Base Year with complete details, together with the forecast for each year of the Business Plan Period based on the proposed efficiency in operating costs, norms for O&M cost allowance including indexation and other appropriate mechanism;
 - (f) Details of depreciation
 - (g) A set of targets proposed for other controllable items such as working capital, availability of the Transmission System, quality of supply targets, etc. The targets shall be consistent with the capital investment plan proposed by the Licensee;
 - (h) Proposals for Non-Tariff Income with itemwise description and details;
 - (i) Proposals in respect of income from Other Business;
 - (j) Other Information: This shall include any other details considered appropriate by the Transmission Licensee for consideration during determination of tariff; and
 - (k) SLDC Charges.

4.2 The Commission shall specify suitable norms of operation for the Transmission Licensee, based on the submission of the Business Plans, past trend and prudence check by the Commission.

4.3 The Commission will broadly classify costs incurred by licensee as controllable and non-controllable. For all controllable costs, the Commission may set the targets for each year under review in the approved Business Plan. These targets shall be used for computing revenue requirement.

4.4 All non-controllable costs as checked by the Commission with due diligence and prudence shall be treated as pass-through.

4.5 The performance parameters, whose trajectories have been specified in the Regulations, shall form the basis of projection of these performance parameters in the Business Plan.

4.6 Annual review of performance shall be conducted based on the actual *vis-à-vis* the approved forecast and categorization of variations in performance into controllable factors and uncontrollable factors;

4.7 The Commission shall make periodic reviews of the licensee's performance during the control period to address any practical issues, concerns or unexpected outcomes that may arise and in general.

Capital Investment

- 4.8 Capital investments shall cover spending on capital equipment that augments fixed assets, and capitalisation of corresponding interest and expenses determined as per the applicable accounting policies and guidelines. Capital investments may address a variety of needs such as, meeting load growth, refurbishment and replacement of equipment, reduction of losses, improvement of quality of supply and system reliability, metering, communication, computerization, etc.
- 4.9 The licensee shall propose in its filing a detailed capital investment plan. The Capital Investment Plan of the Transmission Licensee shall be consistent with the estimated growth plan of its Beneficiaries and transmission system plan for the intra-State transmission system.
- 4.10 The capital investment plan must separately show ongoing projects that will spill into the year under review, and new projects that will commence but may be completed within or beyond the tariff period.
- 4.11 Capital cost for a Project shall include :
- (a) The expenditure incurred or projected to be incurred up-to-date of commercial operation of the project;
 - (b) Interest during construction and financing charges on the loan (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;
 - (c) Capitalised initial spares subject to the ceiling norms specified as 2.00% of the original project cost;
 - (d) Increasing cost in contract packages as approved by the Commission; and
 - (e) Adjustment of any revenue earned by the Transmission Licensee by using the assets before CoD.
- 4.12 In addition to the approved capital investment plan, the licensee can seek provision for additional capital expenditure anytime during the tariff year to meet natural calamities involving substantial investments. The Commission shall examine and if satisfied shall approve the corresponding costs for inclusion in revenue requirement in the next period.
- 4.13 While presenting the justification for new projects, the licensee shall detail the specific nature of the works, and outcome sought to be achieved. The detail must be shown in the form of physical parameters, e.g., new capacity added, to be added, software/hardware/IT system to be procured etc, so that it is amenable to physical verification. This is necessary

to ensure that the approved investment plans are implemented and the licensee does not derive improper financial benefit by delaying or neglecting to make the proposed investment.

- 4.14 The Commission shall review the licensee's capital investment plan for approval, and for this purpose may require the licensee to provide relevant technical and commercial details. The costs corresponding to the approved capital investment plan of a licensee for a given year will, after prudence check shall form the basis for determination of tariff:

Provided that prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost overrun and time overrun, and such other matters as may be considered appropriate by the Commission for determination of tariff.

- 4.15 The Licensee shall quarterly submit the details of the schemewise asset capitalization along with receipt of the Electrical Inspector certificate (wherever applicable) and other documents as may be required by the Commission from time to time for allowing Depreciation.
- 4.16 In case of any significant shortfall in physical implementation, the Commission shall require the licensee to explain the reasons, and may proportionately reduce the provision, including the interest and the return component, made towards revenue requirement, in the next period.
- 4.17 Licensee could retain financial benefit arising out of savings in financing costs due to faster implementation at lower costs because of better project management or procurement practices. Financial losses on account of time and cost overrun to be on account of the licensees only.

Additional Capitalization

- 4.18 The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:
- (a) Undischarged liabilities;
 - (b) Works deferred for execution;
 - (c) Procurement of initial capital spares within the original scope of work, subject to the provisions under Regulation 4.11((c)) of these Regulations;
 - (d) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
 - (e) Change in law.

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff:

Provided further that the assets forming part of the project but not put to use, shall not be considered.

- 4.19 The capital expenditure incurred or projected to be incurred, on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:
- (a) Liabilities to meet award of arbitration or for compliance of the order or decree of a court.
 - (b) Change in law.
 - (c) Any additional works/services, which have become necessary for efficient and successful operation of a transmission system but not included in the original capital cost
 - (d) Any undischarged liability towards final payment/withheld payment due to contractual exigencies for work executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payment, etc.

Renovation and Modernization

- 4.20 The Transmission Licensee, for meeting the expenditure on renovation and modernization (R&M) for the purpose of extension of life beyond the useful life of the a unit of transmission system, shall make an application (separately) before the Commission for approval of the proposal with a Detailed Project Report giving complete Scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, record of consultation with beneficiaries and any other information considered to be relevant by the transmission licensee.
- 4.21 Where the transmission licensee, makes an application for approval of its proposal for renovation and modernisation, the approval shall be granted after due consideration of reasonableness of the cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission.
- 4.22 Any expenditure on replacement, renovation and modernization or extension of life of old fixed assets, as applicable to Transmission Licensee, shall be considered after writing off the net value of such replaced assets from the original capital cost and will be calculated as follows:

Net Value of Replaced Assets = O.C.F.A. – A.D. – C.C.

Where;

O.C.F.A.: Original Capital Cost of Replaced Assets;

A.D.: Accumulated depreciation pertaining to the Replaced Assets;

C.C.: Total Consumer Contribution pertaining to the Replaced Assets.

Transmission Loss

- 4.23 The commission shall examine the filing made by transmission licensee in respect of transmission loss and shall approve a loss target for each year of the Control Period, based on the opening loss levels, licensee's filings/submissions, past trends, objections raised by the stakeholders and any other factor considered relevant by the Commission. This approved loss target will be used for computing estimated energy for transmission in licensee's system for that year.
- 4.24 The licensee will have to share with the consumers' part of the financial gains arising from achieving higher loss reduction *vis-à-vis* the target as per the mechanism for sharing of gains defined in Regulation 8.45. In case the actual transmission loss exceeds the normative loss level approved by the Commission, such excess loss shall be to the account of the transmission licensee.

5. PROCEDURE FOR TARIFF DETERMINATION

- 5.1 The transmission licensee shall make an application, for determination of tariff based on capital expenditure incurred duly certified by the auditors or projected to be incurred up to the date of commercial operation and additional capital expenditure incurred duly certified by the auditors or projected to be incurred during the tariff period. If commission so desires, the commission can get the capital expenditure verified by an independent agency appointed by the Commission, the cost of such verification shall be borne by the transmission licensee or as directed by the commission:

Provided further that application shall contain details of underlying assumptions for projected capital cost and additional capital expenditure, where applicable:

Provided further that any estimated additional capitalization will be as per Regulation 4.18 and 4.19 of this regulation.

- 5.2 The licensee shall make all filings for Annual Revenue Requirement (ARR) as per annual schedule, by November 30th of every year of the Control Period. The A.R.R. shall contain the proposal for Transmission tariff. The licensee shall furnish the required information with regard to technical, commercial and financial parameters in the formats as approved by the Commission from time to time.
- 5.3 The filings for Transmission Tariff for the year shall contain the following:
- (a) The Transmission System or network usage forecast, consistent with the Business Plan;

- (b) Proposals for transmission tariff design, including the losses to be charged and the procedure thereof;
- (c) Proposal for transmission tariff rate, supported by adequate justification;
- (d) Proposal for reactive energy charges;
- (e) Expected Revenue from the Licensed Business, Non-Tariff Income and income from Other Business and other matters considered appropriate by the Transmission Licensee.

- 5.4 The licensee in the A.R.R. filing for the ensuing financial year shall indicate the manner in which the gap, if any, between the charges which it is permitted to recover and the expected revenue calculated shall be filled up.
- 5.5 A Tariff Order shall continue to be in force for such period as may be indicated in the said order unless amended earlier.
- 5.6 The Accounting Policy and Chart of Accounts shall be followed by the licensee, as determined by the Commission from time to time.
- 5.7 The Commission may seek clarification and additional information on the application and the applicant shall provide clarifications and additional information within the date stipulated by the Commission.
- 5.8 Every application for determination of tariff or for continuation of previously determined tariff shall be accompanied by a fee as specified by the commission for filing of petitions or applications before the Commission, as amended from time to time.
- 5.9 Notwithstanding anything contained in these Regulations, the Commission shall at all times have the authority, either on *suo motu* basis or on a Petition filed by the applicant, to determine the tariff, including terms and conditions thereof, of any transmission company.
- 5.10 The commission, if need arises, due to insufficiency of data, explanation, information, etc provided by the petitioner, may issue provisional tariff till such time final tariff is determined.

6. GENERAL APPROACH AND GUIDING PRICIPLES

The Licensee shall keep in view the following principles while filing application for transmission tariff.

- 6.1 **Separation of Transmission and SLDC functions:** The Transmission Licensee shall separate its business into transmission and S.L.D.C. functions, if any, and segregate its accounts between these two businesses. The S.L.D.C. charges shall be recovered in accordance with O.E.R.C. (Fees and charges of S.L.D.C. and other related matter) Regulation, 2010 and amendment specified from time to time.
- 6.2 **Baseline:** The baseline values (operating and cost parameters) for the Control Period shall be determined by the Commission and based on the approved values by the Commission in the past, i.e. audited accounts, estimate of the actual for the relevant year, prudence check and other factors considered appropriate by the Commission.

- 6.3 **Controllable and Uncontrollable costs:** The Commission defines the following elements of cost as Controllable or Uncontrollable nature:

Sl. No.	A.R.R. Item	Controllable/ Uncontrollable Cost
1	Employee Cost	Controllable
2	Repair and Maintenance	Controllable
3	Administrative & General Expenses	Controllable
4	Interest and Finance Charges	Controllable
5	Depreciation	Controllable
6	Return on Equity	Controllable
7	Non-tariff Income	Controllable
8	Taxes on Income	Uncontrollable
9	Inflation	Uncontrollable
10	Exchange rate variation	Uncontrollable
11	Force Majeure Conditions	Uncontrollable

Provided further that the above specified table will be valid starting from the 1st Control Period under these Regulations, i.e., from 1st April 2014 up to 31st March 2019 or till such time the same is revised by the Commission.

- 6.4 **Operational Norm:** Recovery of full annual transmission charge by the Transmission Licensee shall be based on the achievement of the Normative Annual Transmission System Availability Factor (N.A.T.A.F.) as specified below:

A.C. system : 98.50 %

Provided that the recovery of full annual transmission charges below the target availability shall be on a *pro rata* basis:

Provided that for A.C. system, two trippings per year shall be allowed. After two trippings in a year, additional 12 hours outage shall be considered in addition to the actual outage:

Provided also that in case of outage of a transmission element affecting evacuation of power from a generating station, outage hour shall be multiplied by a factor of 2:

Provided also that, the norms of operation specified in these regulations are the ceiling norms and shall not preclude the Transmission Licensee and the beneficiaries from agreeing to the improved norms of operation and in case the improved norms are agreed to, such improved norms shall be applicable for determination of tariff:

Provided further that, the Tariff of the transmission licensee, may also be determined in deviation of the norms specified in these regulations subject to the conditions that,—

- (a) the levelised tariff over the useful life of the project on the basis of the norms in deviation does not exceed the levelised tariff calculated on the basis of the norms specified in these regulations. For the purpose of calculating the levelised tariff, the discounting factor shall be as notified by the Commission from time to time; and
- (b) any deviation shall come into effect only after approval by the Commission, for which an application shall be made by the Transmission Licensee:

Provided further that, the Commission may on its own revise the norms of operation specified above.

- 6.5 **Transmission Tariff:** The Transmission Tariff payable by the Beneficiaries of the Transmission System shall be designed to recover the Aggregate Revenue Requirement approved by the Commission for each year of the Control Period. The transmission Tariff shall be computed as follows:

A.R.R./ Total Energy handled in the Transmission System of the Licensee

In addition to transmission tariff, charges for reactive energy as may be specified by the Commission shall also be payable by all the Beneficiaries of the system.

The Transmission Licensee shall raise the bill for the transmission charge basing on the transmission tariff and reactive energy charge for a month as per the share of energy transmitted to the Beneficiaries through the system:

Provided that, if the transmission system availability factor for the year is greater than the Normative annual transmission availability factor, in per cent specified in Regulation 6.4, the incentive shall be calculated on an annual basis using the following formula:

$$\text{A.R.R.} \times \{(\text{T.A.F.Y./N.A.T.A.F.}) - 1\}$$

Where,

A.R.R. – Aggregate Revenue Requirement specified for the year, in Rupees

N.A.T.A.F. – Normative annual transmission system availability factor, in per cent specified in Regulation 6.4

T.A.F.Y. – Transmission system availability factor for the year, in per cent computed in accordance with Appendix B.

7. TRUING UP OF CAPITAL EXPENDITURE AND TARIFF

- 7.1 The Transmission licensee may file an application each year for truing up along with the tariff petition filed for the next tariff period and the Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period:

- 7.2 For Trueing-up the licensee should submit the data pertaining to audited expense, expense allowed in ARR for each of the expense head. The licensee should also indicate the deviation between the actual audited data and expense approved/allowed in ARR along with the reason/justification for such deviation.
- 7.3 Trueing-up shall be carried out, on the basis of actual expenses booked in the audited books of account of the Transmission Licensee for the year, expenses allowed in the ARR for the corresponding financial year, subject to prudence check by the Commission and due regard to TAFY:

Provided that true up for any period shall be governed by the provisions of the regulation under which the tariff for that year was determined:

Provided that if such variations on account of True-up are large, and it is not feasible to recover the same in one year alone, the Commission may take a view to create a regulatory asset, as per the regulation 7.4.

- 7.4 The Commission may create regulatory assets in case of the Transmission Licensee incurring losses on account of force majeure and/or cost variations due to uncontrollable factors:

Provided that the amortization schedule corresponding to the regulatory asset shall be prepared and put in effect along with creation of regulatory asset:

Provided that the carrying cost of the regulatory asset shall be determined by commission from time to time taking into account the State Bank Base Rate for the tenure for which regulatory asset has been created.

8. PRINCIPLES FOR DETERMINATION OF ARR

- 8.1 The Aggregate Revenue Requirement for the Transmission Business for each year, shall contain the following items;
- (a) Operation and Maintenance expenses;
 - (b) Interest and Finance 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

Operation and Maintenance expenses

- 8.2 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).**

8.3 These costs for the base year shall be recognized at actual or as allowed by the Commission, whichever is lower.

8.4 The commission shall undertake a prudence check of the submission made by Transmission licensee for O. & M. cost before allowing such expenditure in A.R.R.

8.5 The charges for auxiliary energy consumption in the sub-station for the purpose of air conditioning, lighting and consumption in other equipment shall be borne by the transmission licensee/S.T.U. and included in the operation and maintenance expenses.

Determination of Salaries, wages, pension contribution and other Employee Cost

8.6 Wages and salaries during the control period shall be determined based on the base year values of Basic Pay and Grade Pay escalated for annual salary increments and inflation based on Govt. of Odisha notification issued from time to time.

8.7 Basic Pay and grade pay are to be taken from last available annual audited accounts of the Licensee. However if as per the Commission's assessment the figures shown in the audited accounts cannot be relied upon, the Commission may take into account the actual payment outgo during the last six months of the year to arrive upon the pay for the ensuing year.

8.8 Dearness Allowance, HRA and other allowance would be calculated as per rates notified by Govt. of Odisha from time to time:

Provided notwithstanding anything contained in Regulations 8.6 to 8.8 the Commission may adopt a separate norm for Licensee other than S.T.U. (O.P.T.C.L.) on case to case basis.

8.9 Terminal liabilities would be provided based on a periodic actuarial valuation to be made by the Commission in line with the prevailing Indian accounting standards.

8.10 The Commission shall take into consideration various recourses taken by transmission licensees e.g. outsourcing and engaging contractual employees to undertake day to day operation and network maintenance activities, while finalizing the employee cost during the approval of ARR in the control period.

8.11 The Commission may from time to time direct the transmission licensees to submit any incentive and disincentive scheme for improving the productivity of employees.

Determination of Administrative and General (A. & G.) Expenses

8.12 The A. & G. Expenses for each subsequent year will be determined by escalating the A. & G. Expenses for the base year, at the escalation factor equal to W.P.I. to arrive at permissible A&G expenses for each year of the Control Period.

- 8.13 The Commission may, in addition to the normal A. & G. expenses may allow additional expenses under this head for special measures to be undertaken by the transmission licensees towards reduction of Transmission losses and improving system availability: Provided the commission will undertake a prudence check before allowing such expenditure.
- 8.14 In case of S.T.U. (O.P.T.C.L.), the commission shall allow A. & G. Expenses by giving an escalation factor equal to WPI over the amount approved by the commission in the previous year.

Determination of Repairs and Maintenance (R&M)

- 8.15 Repair and Maintenance expenses would be allowed at the rate of 2.5% of Gross Fixed Assets (GFA) only on assets owned by the transmission company, for each year of the Control Period.
- 8.16 In case of S.T.U. (O.P.T.C.L.), the Commission shall allow Repair and Maintenance expenses basing on past trend and requirement of the licensee in this regard after prudence check.

Interest and Finance charges

- 8.17 The costs corresponding to the approved investment plan of a licensee for a given year will, normally, be considered for its revenue requirement. For the past investments, actual values will be considered. Depreciation reserves to the extent available shall be utilised for financing the investments. The licensee shall not earn return from the assets created through this depreciation reserve.
- 8.18 For a project declared under commercial operation on or after 01.04.2014, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided also that in case of a transmission licensee where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff. The equity in excess of 30% shall be treated as normative loan:

Provided also that in case of a transmission licensee where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Provided further that any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt:-equity ratio.

Explanation-The premium, if any, raised by the transmission licensee, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on

equity, only if such premium amount and internal resources are actually utilized for meeting the capital expenditure of the transmission system.

8.19 In case of the transmission system declared under commercial operation prior to 01.04.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.03.2014 shall be considered.

8.20 Any expenditure incurred or projected to be incurred on or after 01.04.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension the normative debt-equity ratio shall be considered to be 70:30 for determination of tariff.

8.21 The outstanding loan capital shall be calculated using the normative debt:equity ratio and normative repayment made every year.

Provided that the amount of such normative repayment for a year shall be equal to the amount of depreciation on the fixed asset to which such loan relates:

Provided further that where the outstanding normative loan balance is less than the amount of normative loan repayment calculated as above, the repayment shall be assumed to be equal to the outstanding normative loan balance and no further amount shall be permitted on account of such loan:

Provided further that for the Transmission Licensee formed as a result of a transfer scheme, the date of the transfer scheme shall be the effective date for the determination of equity capital and the Debt to Equity Ratio. Based on the equity capital and the Debt to Equity Ratio, for the assets covered under Transfer Scheme the debt and equity shall be considered while determining normative loan on capital asset.

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

8.22 For normative loans outstanding at the beginning of the year on the revenue account, the licensee shall indicate in its filing the expected interest outgo for each year. This will be considered towards revenue requirement of the licensee for such years.

8.23 The licensee shall make efforts to reduce the cost of the outstanding loans, in case of declining interest rates, by way of swapping. The licensee, till the next tariff review, may retain the benefit of such savings, when the actual cost of interest will be considered as the base for subsequent years.

8.24 The rate of interest on capital loans shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each Financial Year.

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the transmission licensee does not have actual loan, then the weighted average rate of interest of the company as a whole shall be considered.

- 8.25 Interest on Working Capital: Working capital shall include—
- (a) Receivables equivalent to one month of fixed cost;
 - (b) Maintenance spares @ 15% of operation and maintenance expenses as specified in regulation 8.2 to regulation 8.15;
 - (c) Operation and maintenance expenses (as specified in regulation 8.2 to regulation 8.15) for one month.

- 8.26 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 S.T.U. (O.P.T.C.L.) 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.

Return on Equity

- 8.27 Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulations 4.8 to 4.22 and regulation 8.17 to 8.24.
- 8.28 The Transmission Licensee, shall be allowed a return on equity capital at the rate of 15.5 % per cent per annum (post tax), in Indian Rupee terms, on the amount of equity capital determined in accordance with regulations 4.8 to 4.22 and regulation 8.17 to 8.24.
- 8.29 In case of S.T.U. (O.P.T.C.L.), Return on equity shall be computed in rupee terms, on the equity base as determined by the Commission.
- 8.30 In case of foreign currency brought as capital, the Commission may consider a separate rate of return if foreign exchange variation is allowed as a pass through.
- 8.31 The tax only to the extent of the tax on return is provided as pass through.

Depreciation

- 8.32 Depreciation shall be computed from the date of commercial operation of a transmission system including communication system or element there of. The value base for the purpose of depreciation shall be the capital cost of the asset as admitted by the Commission.
- 8.33 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.
- 8.34 Depreciation shall be calculated annually based on Straight Line Method and at rates as specified in Appendix-A to these regulations.
- 8.35 In case of the existing projects, the balance depreciable value as on 01.04.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.03.2014 from the gross depreciable value of the assets.

8.36 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.

8.37 For the purpose of tariff determination, the rate of depreciation will be linked to the useful life of the asset, calculated on straight-line method. However, a higher rate of depreciation may be permitted by the Commission, in case of inadequacy of cash for debt repayment.

8.38 For S.T.U. (O.P.T.C.L.), Depreciation shall be calculated for each year of the Control Period, on the original book value of assets considering applicable depreciation rate as determined by the commission from time to time:

Provided that depreciation shall not be allowed on assets funded by transmission system users (i.e., any receipts from transmission system users that are not treated as revenue) and capital subsidies/grants:

Provided further that the Licensee shall submit year-wise details of assets retired and disposed off, which shall be removed from the Original Cost of Fixed Assets:

Provided further that assets shall normally be not retired before completion of the useful life and the Licensee shall take prior approval of the Commission in case of retiring any asset before its useful life:

Provided further that the Licensee shall submit year-wise details of the assets which have completed its useful life.

Non Tariff Income

8.39 The amount of Non-Tariff Income as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in calculating the tariff by the Transmission Licensee.

8.40 The Transmission Licensee shall submit full details of his forecast of Non-Tariff Income to the Commission along with his application for determination of tariff. The indicative list of various heads to be considered for Non-Tariff Income shall be as under:

- (a) Income from rent of land or buildings;
- (b) Income from sale of scrap;
- (c) Profit derived from disposal of assets;
- (d) Income from statutory investments;
- (e) Interest on delayed or deferred payment on bills;
- (f) Interest on advances to suppliers/contractors;
- (g) Rental from staff quarters;
- (h) Income from hire charges from contractors and others;
- (i) Income from advertisements, etc.;
- (j) Miscellaneous receipts;
- (k) Prior period income

- 8.41 The interest earned from investments made out of Return on Equity shall not be included in Non-Tariff Income.

Income from other business

- 8.42 Where the Transmission Licensee has engaged in any Other Business, an amount equal to one-third of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the Aggregate Revenue Requirement in calculating the tariff of the Transmission Licensee:

Provided that the Transmission Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Transmission Business and the Other Business and shall submit the Allocation Statement, duly audited and certified by the statutory auditors, to the Commission along with his application for determination of tariff:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceeds the revenues from such Other Business, no amount shall be allowed to be added to the Aggregate Revenue Requirement of the Transmission Licensee on account of such Other Business.

Tax on Income

- 8.43 Income tax of the Transmission Licensee shall be recovered from the beneficiaries. This will exclude income tax on other income streams (non-transmission business).
- 8.44 The actual assessment of income tax should take into account benefits of tax holiday, and the credit for carry forward losses applicable as per the provisions of the Income Tax Act 1961 shall be passed on to the consumers.

Profit sharing

- 8.45 The licensee will be provided with an approved return at the beginning of the period under review. However, the licensee, if it makes more profit than the approved return on account of improved performance, the Commission shall treat the profit beyond the approved return in the following manner:

- (a) One-third amount to be declared by the licensee as dividends to the shareholders is not paid out as dividend, it shall be eligible to be treated as part of equity to that extent and earn returns on the same. Any future declaration of dividend from this shall lead to commensurate decrease in the equity base for the purpose of returns.
- (b) One-third amount to be returned back to consumers by way of reduction in the beneficiary's bills as rebate.
- (c) One-third amount shall be kept as tariff balancing reserve, which shall be used to reduce sharp rise in A.R.R. in future years. The Commission may allow a part of the

total reserve to be returned back to the consumers every 3 years by way of reduction in A.R.R. The amount in tariff balancing reserve shall not be eligible to be treated as part of equity and would not earn any return for the shareholders. Any return earned on this reserve shall be added back to this reserve

Sharing of C.D.M. Benefits

- 8.46 The proceeds of carbon credit from approved C.D.M. project shall be shared in the following manner, namely:—
- (a) 100% of the gross proceeds on account of C.D.M. to be retained by the project developer in the first year after the date of commercial operation of the transmission system.
 - (b) in the second year, the share of the beneficiaries shall be 10% which shall be progressively increased by 10% every year till it reaches 50%, where after the proceeds shall be shared in equal proportion, by the Transmission Licensee, and the beneficiaries.

Recovery of Fee

- 8.47 The Transmission licensee shall recover the fees and charges as for filing of petitions or applications before the Commission, as determined by commission from time to time.

Late Payment Surcharge

- 8.48 In case the payment of any bill for charges payable under these regulations is delayed by a beneficiary beyond a period of 30 days from the date of receipt of bill a late payment surcharge at the rate of 1.25% per month shall be levied by the Transmission Licensee.

Rebate

- 8.49 For payment of bills of the transmission licensee through letter of credit on presentation or through N.E.F.T./R.T.G.S. within a period of 2 working days of presentation of bills by the transmission licensee, a rebate of 2% shall be allowed.
- 8.50 Where payments are made on any day after 2 working days and within a period of 30 days of presentation of bills by the transmission licensee, a rebate of 1% shall be allowed

Quality of Supply and consumer services

- 8.51 The quality of supply shall be monitored as per the norms specified by the Commission from time to time.
- 8.52 The quality of supply would be used to evaluate the performance of licensees. The Commission shall monitor the following Quality of Supply parameters during the Control Period:

- (a) **Transmission System Availability**
- (b) **Transformer Failure**, across various capacities which represents the number of transformer failures as a percentage of the total number of transformers in that specified capacity within the Transmission System, over a specified period of time.

Provided, the Commission, from time to time may revise the Quality of Supply parameters to be monitored.

- 8.53 The Licensee shall submit the performance on each parameter in the form and manner directed by the Commission. The Commission shall conduct periodic reviews on the performance of the Licensee with respect to quality parameters.

Metering and Accounting

- 8.54 The provisions of the Grid Code shall be applicable.

Foreign Exchange Rate Variation

- 8.55 The Transmission Licensee, may hedge foreign exchange exposure in respect of the interest on foreign currency loan and repayment of foreign loan acquired for the transmission system, in part or full in the discretion of the Transmission Licensee.
- 8.56 Every Transmission Licensee shall recover the cost of hedging of foreign exchange rate variation corresponding to the normative foreign debt, in the relevant year on year-to-year basis as expense in the period in which it arises and extra rupee liability corresponding to such foreign exchange rate variation shall not be allowed against the hedged foreign debt.
- 8.57 To the extent the Transmission Licensee is not able to hedge the foreign exchange exposure, the extra rupee liability towards interest payment and loan repayment corresponding to the normative foreign currency loan in the relevant year shall be permissible provided it is not attributable to the Transmission Licensee or its suppliers or contractors.
- 8.58 Every Transmission Licensee shall recover the cost of hedging and foreign exchange rate variation on year-to-year basis as income or expense in the period in which it arises.

Recovery of Cost of Hedging Foreign Exchange Rate Variation

- 8.59 Recovery of cost of hedging and foreign exchange rate variation shall be made directly by the Transmission Licensee, from the beneficiaries, without making any application before the Commission:
- 8.60 Provided that in case of any objections by the beneficiaries to the amounts claimed on account of cost of hedging or foreign exchange rate variation, the Transmission Licensee, may make an appropriate application before the Commission for its decision.

9. MISCELLANEOUS**Power to remove difficulties**

- 9.1 If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by general or special order, do anything not being inconsistent with the provisions of the Act, which appears to it to be necessary or expedient for the purpose of removing the difficulties.

Power to Relax

- 9.2 The Commission, for reasons to be recorded in writing, may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.

Power to Amend

- 9.3 The Commission, for reasons to be recorded in writing, may at any time vary, alter or modify any of the provisions of these Regulations by amendment.

Interpretation

- 9.4 If a question arises relating to the interpretation of any provision of these Regulations, the decision of the Commission shall be final.

Saving of Inherent Powers of the Commission

- 9.5 Nothing contained in these Regulations shall limit or otherwise affect the inherent powers of the Commission from adopting a procedure, which is at variance with any of the provisions of these Regulations, if the Commission, in view of special circumstances of the matter or class of matters and for the reasons to be recorded in writing, deems it necessary or expedient to depart from the procedure specified in these Regulations.

By order of the Commission

G.K. DHALL
Secretary

Appendix-A
Depreciation Schedule

Sl. No.	Asset Particulars	Depreciation Rate (Salvage value = 10%)
(1)	(2)	(3)
A	Land under full ownership	0%
B	Land under lease	
a	for investment in the land	3.34%
b	For cost of clearing the site	3.34%
C	Assets purchased new	
a	Building & Civil Engineering works of a	
(i)	Offices and showrooms	3.34%
(ii)	Temporary erections such as wooden structures	100.00%
(iii)	Roads other than Kutcha roads	3.34%
(iv)	Others	3.34%
b	Transformers, Kiosk, sub-station equipment & other fixed apparatus (including plant	
(i)	Transformers including foundations having rating of 100 KVA and over	5.28%
(ii)	Others	5.28%
c	Switchgear including cable connections	5.28%
d	Lightning arrestor	
(i)	Station type	5.28%
(ii)	Pole type	5.28%
(iii)	Synchronous condensor	5.28%
e	Batteries	
(i)	Underground cable including joint boxes and disconnected boxes	5.28%
(ii)	Cable duct system	5.28%
f	Overhead lines including cable support	
(i)	Lines on fabricated steel operating at terminal voltages higher than 66 KV	5.28%
(ii)	Lines on steel supports operating at terminal voltages higher than 13.2 KV but not exceeding 66 KV	5.28%
(iii)	Lines on steel on reinforced concrete support	5.28%
(iv)	Lines on treated wood support	5.28%
g	Meters	5.28%
h	Self propelled vehicles	9.50%
i	Air Conditioning Plants	
(i)	Static	5.28%
(ii)	Portable	9.50%
j(i)	Office furniture and furnishing	6.33%

1	2	3
(ii)	Office equipment	6.33%
(iii)	Internal wiring including fittings and apparatus	6.33%
(iv)	Street Light fittings	5.28%
k	Apparatus let on hire	
(i)	Other than motors	9.50%
(ii)	Motors	6.33%
l	Communication equipment	
(i)	Radio and high frequency carrier system	6.33%
(ii)	Telephone lines and telephones	6.33%
m	I. T equipments	15.00%
n	Any other assets not covered above	5.28%

Appendix-B

1. Transmission system availability factor for a calendar year (T.A.F.Y.) shall be calculated by the respective transmission licensee, got verified and certified by the S.L.D.C., for each A.C. transmission system and grouped according to sharing of transmission charges.
2. TAFY, in per cent, shall be equal to $(100 - 100 \times \text{NAFY})$, where NAFY is the non-availability factor in per unit for the year, for the transmission system / sub-system.
3. NAFY for A.C. systems / sub-systems shall be calculated as follows :

$$\text{NAFY} = \left[\sum_{l=1}^L (\text{OH}_l \times \text{Cktkm}_l \times \text{NSC}_l) + \sum_{t=1}^T (\text{OH}_t \times \text{MVA}_t \times 2.5) + \sum_{r=1}^R (\text{OH}_r \times \text{MVAR}_r \times 4) \right] + \text{THY} \times \left[\sum_{l=1}^L (\text{Cktkm}_l \times \text{NSC}_l) + \sum_{t=1}^T (\text{MVA}_t \times 2.5) + \sum_{r=1}^R (\text{MVAR}_r \times 4) \right]$$

Where,

l identifies a transmission line circuit;

t identifies a transformer / Inter connecting transformer (ICT);

r identifies a bus reactor, switchable line reactor or Static VAR Compensation(SVC);

L = total number of line circuits;

T = total number of transformers and ICTs;

R = total number of bus reactors, switchable line reactors and SVCs;

OH = Outage hours or hours of non-availability in the year, excluding the duration of outages not attributable to the Transmission Licensee, if any, as per clause 4;

Ckt. km = Length of a transmission line circuit in km;

NSC = Number of sub-conductors per phase;

MVA = MVA rating of a transformer / ICT;

MVAR = MVAR rating of a bus reactor, switchable line reactor or an SVC (in which case it would be the sum of inductive and capacitive capabilities);

THY = Total hours in the year;

4. The transmission elements under outage due to following reasons shall be deemed to be available:
 - (i) Shut down availed for maintenance or construction of elements of another transmission scheme. If the other transmission scheme belongs to the Transmission Licensee, S.L.D.C. may restrict the deemed availability period to that considered reasonable for the work involved.
 - (ii) Switching off of a transmission line to restrict over voltage and manual tripping of switched reactors as per the directions of S.L.D.C.
5. Outage time of transmission elements for the following contingencies shall be excluded from the total time of the element under period of consideration.
 - (i) Outage of elements due to acts of God and force majeure events beyond the control of the Transmission Licensee. However, onus of satisfying the S.L.D.C. that element outage was due to aforesaid events and not due to design failure shall rest with the Transmission Licensee. A reasonable restoration time for the element shall be considered by S.L.D.C. and any additional time taken by the Transmission Licensee for restoration of the element beyond the reasonable time shall be treated as outage time attributable to the Transmission Licensee. S.L.D.C. may consult the Transmission Licensee or any expert for estimation of reasonable restoration time. Circuits restored through ERS (Emergency Restoration System) shall be considered as available.
 - (ii) Outage caused by grid incident/disturbance not attributable to the Transmission Licensee, e.g. faults in substation or bays owned by other agency causing outage of the Transmission Licensee's elements, and tripping of lines, ICTs, etc. due to grid disturbance. However, if the element is not restored on receipt of direction from S.L.D.C. while normalizing the system following grid incident/disturbance within reasonable time, the element shall be considered not available for the period of outage after issuance of S.L.D.C.'s direction for restoration.