

**Delhi Electricity Regulatory Commission**  
**(Terms and Conditions for Determination of Tariff) Regulations, 2016**



**DELHI ELECTRICITY REGULATORY COMMISSION**

**Delhi Electricity Regulatory Commission**

**Notification Delhi,**

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**Delhi Electricity Regulatory Commission**

**(Terms and Conditions for Determination of Tariff) Regulations, 2016**

**No. F. ....** - In exercise of powers conferred under Section 181 read with Sections 61 and 86(1)(b) of the Electricity Act, 2003 (Act 36 of 2003) and all other powers enabling it in this behalf, the Delhi Electricity Regulatory Commission hereby makes the following Regulations namely:

**PART 1**  
**PRELIMINARY**

**1. SHORT TITLE, COMMENCEMENT AND EXTENT**

(1) These Regulations shall be called the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2016.

(2) These Regulations shall come into force from the date of their publication in the Official Gazette and shall remain in force till amended or repealed by the Commission:

Provided that where a project or Scheme or a part thereof of a Utility, has been declared under commercial operation before the date of commencement of these Regulations, tariff in respect of such project or scheme or such part thereof, unless the context otherwise requires, shall be determined in accordance with the Delhi Electricity Regulatory Commission Regulations on Terms and Conditions for determination of Generation, Transmission and Distribution Tariff Regulations for the relevant year, as amended from time to time as in force on that date.

(3) These Regulations shall extend to the whole of National Capital Territory of Delhi.

(4) These Regulations shall apply in all cases where tariff for a generating station or a unit thereof, a transmission system used for transmission of electricity or part thereof, a distribution system or part thereof used for wheeling and retail supply of electricity is required to be determined by the Commission under the Act:

Provided that in case of distribution of electricity in the same area by two or more Distribution Licensees, the Commission may, for promoting competition among

Distribution Licensees, fix the ceiling tariff or such other parameters, as it deems fit, for retail sale of electricity.

(5) These Regulations shall not apply for determination of tariff in respect of the following:

(a) Generating station or transmission system or Distribution system/network, whose tariff has been discovered through tariff based competitive bidding in accordance with the guidelines issued by the Central Government under Section 63 of the Act;

(b) Generating station based on renewable sources of energy whose tariff is determined in accordance with the Delhi Electricity Regulatory Commission's any other Regulations / Orders, as amended from time to time.

## **2. DEFINITIONS AND INTERPRETATION**

In these Regulations, unless the context otherwise requires,

(1) **“Act”** means the Electricity Act, 2003 (36 of 2003), including any amendment or any statutory modification or re-enactment thereto;

(2) **“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;

(3) **“Aggregate Revenue Requirement”** or **“ARR”** means the costs pertaining to the Utility's business as determined by the Commission to be admissible in a Financial Year and to be recovered through tariff and charges, in accordance with these Regulations;

(4) **“Allocation Statement”** means for each Financial Year, a statement in respect of each of the businesses of the Utility, showing the amounts of any revenue, cost, asset, liability, reserve or provision etc, which has been either:

- a) Determined by apportionment or allocation between different businesses of the Utility including the Licensed Business, together with a description of the basis of the apportionment or allocation; or
- b) Charged from or to each such Other Business together with a description of the basis of that charge;

- (5) **"Applicable Tariff"** means the tariff approved by the Commission;
- (6) **"Auditor"** means an auditor empanelled with Comptroller and Auditor General (C&AG) of India and appointed by the Utility, in accordance with the provisions of the Companies Act, 2013 as amended from time to time;
- (7) **"Auxiliary Energy Consumption"** or "AUX" in relation to a period in case of a generating station means the quantum of energy consumed by auxiliary equipment of the generating station, such as the equipment being used for the purpose of operating plant and machinery including switchyard of the generating station and the transformer losses within the generating station, expressed as a percentage of the sum of gross energy generated at the generator terminals of all the units of the generating station:
- Provided that the auxiliary energy consumption shall not include the energy consumed for supply of power to housing colony and other facilities at the generating station and the power consumed for construction works at the generating station;
- (8) **"Bank Rate"** means the base rate notified by the State Bank of India;
- (9) **"Base Year"** means the last Financial Year of the current Control Period;
- (10) **"Beneficiary"** in relation to a generating station covered under Section 86 (1) of the Act, means a Distribution Licensee who is purchasing electricity generated at such generating station through a Power Purchase Agreement either directly or through a trader or trading licensee on payment of fixed charges and by scheduling in accordance with the Grid Code:
- Provided that the Distribution Licensee will also be a beneficiary when it is procuring power through a trading licensee, and such arrangement is secured through back to back Power Purchase Agreement and Power Sale Agreement;
- (11) **"Block"** in relation to a combined cycle thermal generating station includes combustion turbine-generator, associated waste heat recovery boiler, connected steam turbine- generator and auxiliaries;
- (12) **"Books of Account"** includes records maintained by a Utility in respect of—
- all sum of money received and expended;
  - all sales and purchases of goods and services;
  - the assets and liabilities; and

- d) any other cost/revenue items or financial transactions;
- (13) **“Business Plan Order”** means the Order of the Commission approving the Business Plan including the norms for various parameters of the Utilities for the Control Period, in accordance with provisions of Part 2 of these Regulations;
- (14) **“Capital Cost”** means the capital cost as determined by the Commission after prudence check in accordance with the relevant Regulations;
- (15) **“Carrying Cost”** means the cost for funding of Regulatory Asset/accumulated Revenue Gap;
- (16) **“Carrying Cost Rate”** means the rate of interest for funding of Regulatory Asset/accumulated Revenue Gap as specified by the Commission in the relevant Orders;
- (17) **“CERC”** means the Central Electricity Regulatory Commission;
- (18) **“Change In Law”** means occurrence of any of the following events:
- (a) Enactment, bringing into effect or promulgation of any new Indian law; or
  - (b) adoption, amendment, modification, repeal or re-enactment of any existing Indian law; or
  - (c) change in interpretation or application of any Indian law by a competent court, Tribunal or Indian Governmental Instrumentality which is the final authority under law for such interpretation or application; or
  - (d) change by any competent authority in any condition or covenant of any consent or clearances or approval or license available or obtained for the project; or
  - (e) coming into force or change in any bilateral or multilateral agreement/treaty between the Government of India and any other Sovereign Government/s or international convention or protocol having implication for the generating station or the transmission system regulated under these Regulations;
- (19) **“Commission”** means the Delhi Electricity Regulatory Commission;

(20) "**Communication System**" includes communication system covered under Unified Load Dispatch and Communication (ULD&C) scheme, Supervisory Control and Data Acquisition System (SCADA), Wide Area Measurement (WAMS), Fibre-Optic Communication system, Remote Terminal Unit (RTU), Private Automatic Branch Exchange Radio Communication System and auxiliary power supply system etc. used for managing transmission and distribution of electricity;

(21) "**Competitive Bidding**" means a transparent process for procurement of equipment, services and works in which bids are invited by the Utility through open advertisement covering the scope and specifications of the equipment, services and works required for the project or scheme, the terms and conditions of the proposed contract, the criteria by which the bids shall be evaluated, and shall include domestic as well as international competitive bidding;

(22) "**Conduct of Business Regulations**" means the Delhi Electricity Regulatory Commission Comprehensive (Conduct of Business) Regulations, 2001, as amended from time to time;

(23) "**Consumer**" means any person defined as such in the Act;

(24) "**Control Period**" means a multi-year period fixed by the Commission, from time to time;

(25) "**Cut-off Date**" means 31<sup>st</sup> March of the year closing after two financial years of the year of commercial operation of whole or part of the project/scheme, and in case the whole or part of the project/scheme is declared under commercial operation in the last quarter of a financial year, the cut-off date shall be 31<sup>st</sup> March of the year closing after three financial years of the year of commercial operation:

Provided that the cut-off date may be extended by the Commission if it is established to the satisfaction of the Commission that the capitalisation could not be made within the cut-off date for reasons beyond the control of the Utility;

(26) "**Date of Commercial Operation**" or "COD" means;

- (a) Date of commercial operation in case of a generating unit or block of the combined cycle thermal generating station shall mean the date declared by the Generating Entity after demonstrating the maximum continuous rating (MCR) or the installed capacity (IC) through a successful trial run and in case of the generating station as a whole, the date of commercial operation of the last generating unit or block of the generating station:



Provided that:

(i) where the beneficiaries have been tied up for purchasing power from the generating station, the trial run shall commence after seven days notice by the Generating Entity to the beneficiaries and scheduling shall commence from 00:00 hrs after completion of the trial run;

(ii) the Generating Entity shall certify to the effect that the generating station meets the key provisions of the technical standards of *Central Electricity Authority (Technical Standards for Construction of Electrical plants and electric lines) Regulations, 2010 and Grid Code* as amended from time to time;

(iii) the certificate shall be signed by the competent authority of the Generating Entity and a copy of the certificate shall be submitted to the Member Secretary, (Northern Regional Power Committee) and SLDC;

(b) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 00:00 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 Entity and transmission licensee shall endeavour for commissioning the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement;

(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 or distribution system by other licensees, the transmission licensee shall approach the Commission for approval of the revised date of commercial operation of such transmission system or an element thereof;

(c) Date of commercial operation in relation to a communication system or element thereof shall mean the date declared by the Utility from 00:00 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 respective SLDC;

(d) Date of commercial operation in relation to Distribution System shall mean the date declared by the Distribution Licensee after charging of electrical line or substation or equipment of a Distribution System to its declared voltage level for its intended purpose after obtaining the required and applicable clearances from Electrical Inspector, if any.

(27) "**Day**" means the 24 hour period starting at 00:00 hour;

(28) "**Declared Capacity**" or "DC" in relation to a generating station means, the capability to deliver ex-bus electricity in MW declared by such generating station in relation to any time-block of the day as defined in the Grid Code or whole of the day, duly taking into account the availability of fuel or water, and subject to further qualification in the relevant Regulation;

(29) "**De-capitalisation**" for the purpose of the tariff under these Regulations, shall mean removal/deletion of assets resulting into corresponding reduction in Gross Fixed Assets of the project/scheme as approved by the Commission;

(30) "**Existing Project/Scheme**" means a project/scheme which has been declared under commercial operation on a date prior to commencement of the Control Period;

(31) "**Expenditure Incurred**" means the amount actually expended and paid in cash or cash equivalent, for creation or acquisition of an asset through deployment of equity or debt or both, and does not include commitments or liabilities for which no payment has been released;

(32) "**Extended Life**" means the life of an asset or part thereof belonging to the Utility beyond the period of useful life, as may be determined by the Commission on case to case basis;

(33) "**Financial Year**" or "**Year**" means a period commencing on 1<sup>st</sup> April of a calendar year and ending on 31<sup>st</sup> March of the subsequent calendar year;



(34) "**Force Majeure**" for the purpose of these Regulations means any event or circumstance or a combination of events and circumstances, which or any consequences of which materially and adversely affects the performance of the Utility in the discharge of its obligations or completion of project/scheme, within the specified time and which are beyond their reasonable control and which they could not have prevented by the exercise of reasonable care and diligence;

(35) "**Generating Entity**" means any company or firm or body corporate or association or body of individuals whether incorporated or not or artificial juridical person, which owns and/or operate a generating station;

(36) "**Generating Station**" means any station for generating electricity, including any building and plant with step-up transformer, switch-gear, switch yard, cables or other appurtenant equipment, if any, used for that purpose and the site thereof; a site intended to be used for a generating station, and any building used for housing the operating staff of a generating station, and where electricity is generated by water power, includes penstocks, head and tail works, main and regulating reservoirs, dams and other hydraulic works, but does not in any case include any sub-station;

(37) "**Generating Unit**" in relation to a thermal generating station (other than combined cycle thermal generating station) means steam generator, turbine-generator and auxiliaries, or in relation to a combined cycle thermal generating station, means turbine generator and auxiliaries;

(38) "**Grid Code**" means the Indian Electricity Grid Code notified by the Central Commission for the time being in force and subject to the provisions therein the Delhi Electricity Regulatory Commission (State Grid Code) Regulations, 2008 as amended from time to time or subsequent re-enactment thereof;

(39) "**Gross Calorific Value**" or "**GCV**" in relation to a thermal generating station means the heat produced in kCal by complete combustion of one kilogram of solid fuel or one litre of liquid fuel or one standard cubic meter of gaseous fuel, as the case may be;

(40) "**Gross Station Heat Rate**" or "**GHR**" means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals of a thermal generating station;

- (41) **"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 coordinated manner;
- (42) **"Infir Power"** means electricity injected into the grid prior to the date of commercial operation of a unit or block of the generating station;
- (43) **"Installed Capacity" or "IC"** means the summation of the name plate capacities of all the units of the generating station or the capacity of the generating station reckoned at the generator terminals, as may be approved by the Commission from time to time;
- (44) **"Investment Approval"** means approval by the Board or any other competent authority of the Utility 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 be reckoned from the date of the resolution/minutes of the Board/approval by competent authority;
- (45) **"Kilowatt-Hour" or "kWh"** means a unit of electrical energy, measured in one kilowatt or one thousand watts of power produced or consumed over a period of one hour;
- (46) **"Licence"** means a Licence granted under Section 14 of the Act;
- (47) **"Licensed Business"** means the functions and activities, which are required to be undertaken by the Licensee, in terms of the Licence granted or being a deemed Licensee, as the case may be, under the Act;
- (48) **"Licensee"** means a person who has been granted a Licence and shall include a deemed Licensee;

- (49) **"Maximum Continuous Rating' or "MCR"** in relation to a generating unit of the thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer at rated parameters, and in relation to a block of a combined cycle thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer with water or steam injection (if applicable) and corrected to 50 Hz grid frequency and specified site conditions;
- (50) **"New Project'** means the project achieving COD or anticipated to be achieving COD on or after the commencement of Control Period;
- (51) **"Non-Tariff Income"** means income from other business including any other income incidental to the Licensed business other than the income from tariff;
- (52) **"Normative Annual Plant Availability Factor" or "NAPAF"** in relation to a generating station means the availability factor as specified in the Business Plan Order;
- (53) **"Original Project Cost"** means the capital expenditure incurred by the Utility within the original scope of the project up to the cut-off date as approved by the Commission;
- (54) **"Original Scope of Work"** means the activities to be performed under a contract or sub-contract in the completion of project or scheme as approved by the Commission;
- (55) **"Other Business"** means any other business of the Licensee other than the licensed business;
- (56) **"Plant Availability Factor" or "(PAF)"** in relation to a generating station for any period means the average of the daily declared capacities (DCs) for all the days during the period expressed as a percentage of the installed capacity in MW less the normative auxiliary energy consumption;
- (57) **"Plant Load Factor" or "(PLF)"** in relation to generating station or unit for a given period means the total sent out energy corresponding to scheduled generation during the period, expressed as a percentage of sent out energy corresponding to installed capacity in that period and shall be computed in accordance with the following formula:

$$PLF = 100 * \sum_{i=1}^n SGi / \{N \times IC \times (1 - AUXn)\} \%$$

**Where,**

- IC = Installed Capacity of the generating station or unit in MW,  
SG<sub>i</sub> = Scheduled Generation in MW for the i<sup>th</sup> time block of the period,  
N = Number of time blocks during the period, and  
AUX<sub>n</sub> = Normative Auxiliary Energy Consumption as a percentage of gross energy generation;

(58) "**Prudence Check**" means scrutiny of reasonableness of revenue and capital expenditure incurred or proposed to be incurred; financing plan, use of efficient technology, cost and time over-run and such other factors as may be considered appropriate by the Commission for determination of tariff;

(59) "**Related Party**" means the persons as defined in Section 2(76) of the Companies Act, 2013;

(60) "**Retail Supply Business**" means the business of sale of electricity by the Licensee to the consumers within its area of supply in accordance with the terms of the Licence for distribution and retail supply of electricity;

(61) "**Retail Supply Tariff**" is the applicable tariff to be charged by the Licensee for supply to its consumers;

(62) "**Salvage value**" means the amount received for capital asset or part thereof retired, less expenses incurred in connection with the sale of such capital asset;

(63) "**Scheduled Energy**" means the quantum of energy scheduled by the state Load Dispatch Centre to be injected into the grid by a generating station for a given time period;

(64) "**Scheduled Generation**" or "**SG**" at any time or for any period or time block means schedule of ex-bus generation in MW or MWh, given by the State Load Dispatch Centre (SLDC) for respective Generating Entity as per the provisions of State Grid Code 2008 amended from time to time;

(65) "**Start Date or Zero Date**" means the date indicated in the Investment Approval for commencement of implementation of the project and where no date has been indicated, the date of investment approval shall be deemed to be the Start Date or Zero Date;

(66) **"Thermal Generating Station"** means a generating station or a unit thereof that generates electricity using fossil fuels as its primary source of energy;

(67) **"Trading Business"** means the business of purchase of electricity by the Distribution Licensee for resale thereof to other Licensee or category of consumers outside the area of supply of the Distribution Licensee;

(68) **"Transmission System"** means a line or a group of lines with or without associated sub-station, equipment associated with transmission lines and sub-stations;

(69) **"Trial Run and Trial Operation"**

(a) Trial Run in relation to generating station or unit thereof shall mean the successful running of the generating station or unit thereof at maximum continuous rating or installed capacity for continuous period of 72 hours in case of unit of a thermal generating station or unit thereof;

(b) Trial operation in relation to a transmission system or an element thereof shall mean successful charging of the transmission system or an element thereof for 24 hours at continuous flow of power, and communication signal from sending end to receiving end and with requisite metering system, telemetry and protection system in service enclosing certificate to that effect from concerned State Load Dispatch Centre;

(70) **"Useful life"** means number of years from the COD in relation to a unit of a Generating Station, Transmission System and Distribution system or part thereof as provided in Appendix-1 of these Regulations;

(71) **"Utility"** means any Generating Entity, Transmission Licensee, Distribution Licensee, System Operator or any other company/Licensee whose business is required to be governed and/or tariff is to be determined by the Commission;

(72) **"Wheeling Business"** means the business of operating and maintaining a distribution system for conveyance of electricity in the area of supply of the Distribution Licensee.

Words and expressions used in these Regulations and not defined herein but defined in the Act or any of the Regulations notified by the Commission shall have meaning assigned to them there-under.

**PART 2**  
**BUSINESS PLAN**

3. The Commission shall issue a Business Plan Order for each Control Period based on the Business Plan submitted by the Utility which shall contain the following parameters applicable for a Control Period:

- (1) Rate of Return on Equity,
- (2) Margin for rate of interest on Loan,
- (3) Operation and Maintenance Expenses,
- (4) Capital Investment Plan,
- (5) Mechanism for sharing of incentive-disincentive mechanism,
- (6) Allocation of overhead expenses incurred on account of Administrative Expenditure out of Operation and Maintenance Expenses for creation of Capital Asset,
- (7) Generating Norms:
  - (a) Gross Station Heat Rate,
  - (b) Plant Availability Factor,
  - (c) Secondary Fuel oil consumption;
  - (d) Auxiliary consumption and
  - (e) Plant Load Factor;
- (8) Transmission Norms:
  - (a) Annual Transmission system availability;
  - (b) Annual Voltage wise Availability;
- (9) Distribution Norms:
  - (a) Distribution Loss Target;
  - (b) Collection Efficiency Target;
  - (c) Targets for Solar and Non Solar RPO;
  - (d) Contingency limit for Sale through UI transactions
  - (e) The ratio of various ARR components for segregation of ARR into Retail Supply and Wheeling Business,

4. The Utility shall submit audited financial statement including Cost Audit report, wherever applicable and data for the cost, revenue and other operating parameters for preceding 5 years along with the Business Plan Petition comprising of following data, as applicable to the Utility:

- (1) Rate of interest on Loan,
- (2) Operation and Maintenance Expenses,
- (3) Capital Expenditure and Capitalisation,
- (4) Non Tariff Income



- (5) Other Business Income
- (6) Actual Generating Parameters:
  - (a) Quantum of Generation
  - (b) Primary Fuel consumption and cost
  - (c) Gross Station Heat Rate,
  - (d) Plant Availability Factor,
  - (e) Secondary Fuel oil consumption and cost;
  - (f) Auxiliary consumption and
  - (g) Plant Load Factor;

- (7) Actual Transmission Parameters:
  - (a) Quantum of Energy Wheeled,
  - (b) Transmission Charges and other Charges collected
  - (c) Annual Transmission system availability;
  - (d) Annual Voltage wise Availability;
  - (e) Voltage Wise and Bay wise – O&M Expenses

- (8) Actual Distribution Parameters:
  - (a) Quantum of Sales Category wise;
  - (b) Connected Load Category wise
  - (c) Base Load and Peak Load
  - (d) Quantum of Power Purchase and Bulk Sale
  - (e) Long term and Short Term Power Purchase Cost
  - (f) Income through Sale of Surplus Power
  - (g) Voltage wise Distribution Loss;
  - (h) Collection Efficiency;
  - (i) Solar and Non Solar RPO;
  - (j) The ratio of various ARR components for segregation of ARR into Retail Supply and Wheeling Business,

5. The Utility shall prepare and submit a Business Plan for next 5 years latest by 31<sup>st</sup> October of it's Base Year comprising of yearly projection of the following parameters, as applicable to the Utility:

**GENERATING ENTITY**

- (1) Operational Data
  - (a) Gross Station Heat Rate,
  - (b) Plant Availability Factor,
  - (c) Secondary Fuel Oil consumption;
  - (d) Auxiliary consumption and
  - (e) Plant Load Factor;

(2) Other Data

- (a) Detailed year-wise Capital Investment Plan with cost benefit analysis;
- (b) Fuel Linkage;
- (c) Cost of Primary and Secondary Fuel
- (d) Appropriate capital structure and cost of financing (interest on debt), terms of the existing loan agreements, etc;
- (e) Operation and Maintenance (O&M) costs;
- (f) Details of Depreciation.

**TRANSMISSION LICENSEE**

- (3) Detailed year wise Capital Investment Plan for the Transmission Licensee with cost benefit analysis;
- (4) Appropriate capital structure and cost of financing (interest on debt), terms of the existing loan agreements, etc;
- (5) Operation and Maintenance (O&M) costs;
- (6) Details of depreciation based on the useful life of the asset and capitalisation schedules.

**DISTRIBUTION LICENSEE**

- (7) Sales Forecast for each consumer category and sub-categories based on following factors:
  - (a) Category wise growth in No. of Consumers;
  - (b) Category wise growth in Sanctioned Load/Contract Demand (MW);
  - (c) Economic Cycle (boom, recession, Government policies etc.);
  - (d) Impact of Open Access (MU), Net Metering (MU), Demand Side Management measures (MU) etc;
  - (e) Any other factor impacting the sales.

(8) Distribution Loss & Collection Efficiency trajectory consisting of:

- (a) Total and voltage-wise distribution losses (%) along with the basis thereof;
- (b) Total and category-wise revenue collection;
- (c) AT&C loss level based upon past trends, sales growth and any other factors.

- (9) The AT&C Loss (%), shall be measured as the ratio of Distribution Loss to the Collection Efficiency.

(10) Any units assessed and billed on account of theft shall only be considered in the year of its realization as specified in the Section 126 (6) of the Act.

(11) Collection Efficiency shall be measured as ratio of total revenue realised to the total revenue billed in the same year:

Provided that Revenue Realised or Revenue Billed on account of electricity duty, late payment surcharge, any other surcharge shall be excluded from the computation of Collection Efficiency.

(12) Distribution Loss shall be measured as the difference between the Energy units input into the distribution system for sale to all its consumer(s) and the total Energy units billed in its Licensed area in the same year.

(13) Power Procurement Plan based on the sales forecast and distribution loss trajectory to serve the demand for electricity in its area of supply clearly indicating estimated quantum of power to be procured from Long-Term sources:

Provided that the estimate should be expressed in Mega-Watt (MW) as well as Million Units (MU).

(14) The Distribution Licensee shall submit validity of the PPAs for existing Long-Term sources and expected CoD of the future sources.

(15) For the short term power requirement & procurement the Distribution Licensee shall be guided by the provisions of these Regulation in addition to the guidelines issued by the Central Government from time to time.

(16) Capital Investment Plan taking into account the sales/demand forecast, power procurement plan, distribution loss trajectory, targets for quality of supply etc.

(17) The investment plan shall be scheme-wise and include:

- (a) Purpose of investment (i.e., replacement of existing assets, meeting load growth, technical loss reduction, reactive energy requirements, customer service improvement, improvement in quality and reliability of supply, etc);
- (b) Capital Structure;
- (c) Capitalization Schedule;
- (d) Financing Plan;
- (e) Cost-benefit analysis;
- (f) Performance improvement envisaged in the Control Period;
- (g) Any other factors influencing investment.

(18) Capital structure and cost of financing (interest on debt) and terms of the existing loan agreements, etc;

(19) Operation and Maintenance (O&M) costs;

(20) Details of depreciation schedule based on the useful life of the asset and capitalisation schedules.

6. The Utility shall submit all source data and indexation parameters used in projecting the Business Plan.

**PART 3**  
**TARIFF PETITION**

7. The Generating Entity and Transmission Licensee shall submit Multi Year Tariff Petition, based on the information and principles followed in the Business Plan, 120 days prior to the end of Base Year.
8. The Commission shall issue Multi Year Tariff Order for each year of the Control Period based on the principles laid down in Part 6 of these Regulations and Business Plan Order for the respective Control Period.
9. The Commission shall true up various components of the ARR of the Generating Entity and Transmission Licensee at the end of the Control Period as detailed out in Part 7 of these Regulations.

**DISTRIBUTION LICENSEE**

10. The Distribution Licensee shall submit Annual Tariff Petition by 15<sup>th</sup> November of each Year which shall contain:
  - (1) Sales Forecast for the ensuing year and audited Sales for previous Year on monthly basis as prescribed in the appendix-2.
  - (1) Expected Revenue to be billed for the ensuing year and audited Revenue Billed and Realised for previous Year as prescribed in the appendix-2.
  - (2) Power Procurement Quantum & Cost for ensuing Year and audited Power Purchase Quantum & Cost for previous Year on monthly basis indicating Long Term and Short Term, Renewable Energy Purchase and other applicable Charges as prescribed in the the appendix -2.

Provided that the Distribution Licensee shall propose the indicative cost of power procurement taking into account revenues from Short term sale of Surplus Power and maximum normative rebate available from each entity;

Provided that the Renewable Purchase Obligation of the Distribution Licensee as per the *Delhi Electricity Regulatory Commission (Renewable Purchase Obligation and Renewable Energy Certificate Framework Implementation) Regulations, 2012* as amended from time to time and shall be part of the Distribution Licensee's Power Procurement Cost;

- (3) Actual and Expected intra- State & inter-State Transmission Loss & Charges including Load Dispatch Charges, Open Access Charge indicating maximum normative rebate available from each entity for the previous and ensuing Year respectively:

Provided that the Distribution Licensee shall propose Wheeling Charges in case the distribution network of other Distribution Licensee is used for procurement of power for the Retail Supply Business;

- (4) Actual and Expected amount on account of Cross-Subsidy Surcharge and Additional Surcharge to be received by the Licensee, as approved by the Commission from time to time in accordance with the *Delhi Electricity Regulatory Commission (Terms and Conditions of Open Access) Regulations 2005* as amended from time to time, shall be indicated separately against the consumer category by the Distribution Licensee;

- (a) Actual Voltage wise Distribution Loss and Collection Efficiency for the previous Year;
- (b) Monthly Energy Balance for the ensuing & previous Year;
- (c) Actual and Expected additional Expenses on account of O&M beyond the Control of Distribution Licensee for the ensuing & previous Year respectively;
- (d) Actual and Expected Capitalisation and Depreciation Schedule for the previous and ensuing Year respectively;
- (e) Actual and Expected Non Tariff Income including Other Business Income for the previous and ensuing Year respectively;
- (f) Weighted average rate of interest on loan.

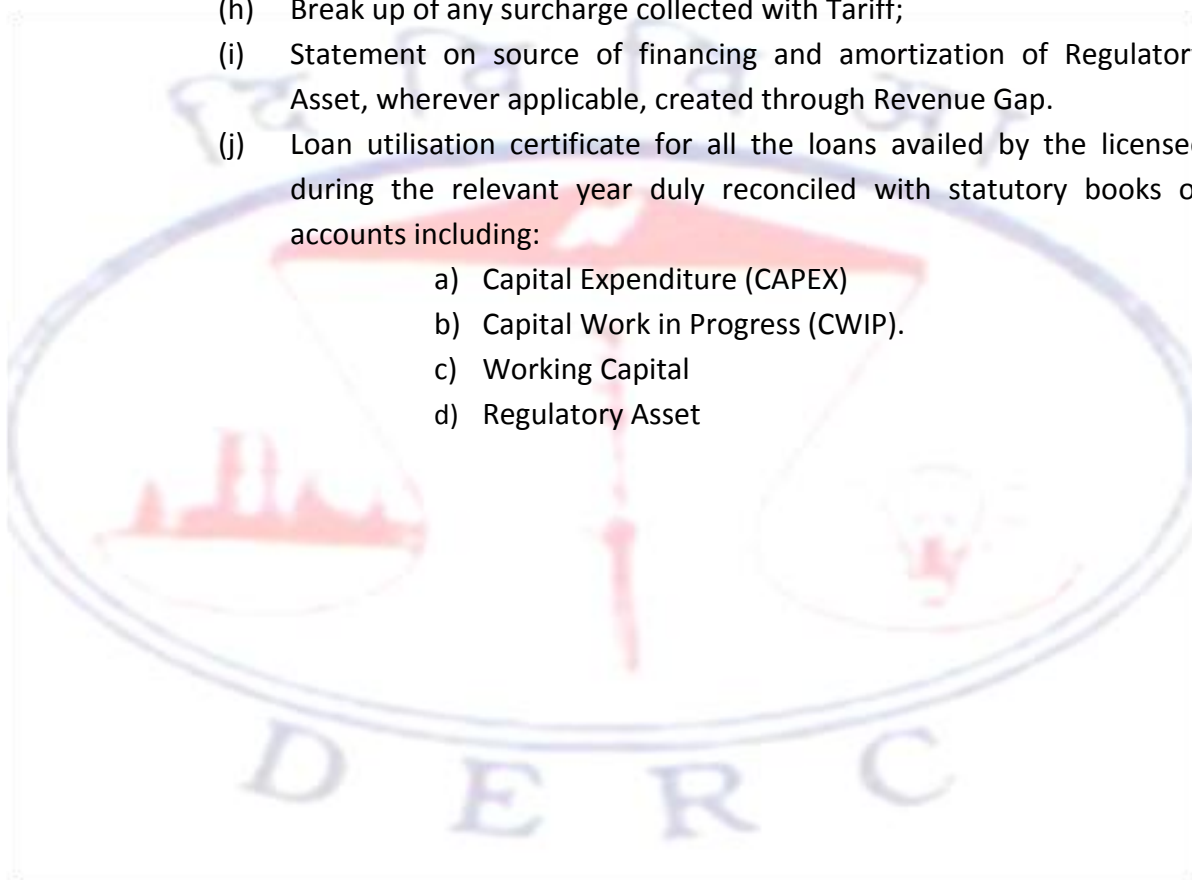
#### **FINANCIAL STATEMENTS**

11. The Tariff Petition shall be accompanied by following Reports and/or Statements duly certified by the Auditor, as applicable:

- (a) Shareholding structure of the Utility along with details of Shareholding and Cross-Shareholding among related parties.
- (b) Accounting Policies including:
  - (i) Ratio for allocation of common expenses and allocation of jointly used assets/revenue among related parties;
  - (ii) Ratio for allocation of common expenses/revenue within different business segments of the Utility:
    - a) Generation and/or Transmission and/or Distribution of a Utility
    - b) Different Units of a Generating Entity



- c) Retail and Wheeling Supply of a Distribution Company
  - d) Any other identifiable Business i.e., Consultancy etc.
- 
- (c) Allocation of overhead cost to capitalised assets in Balance sheet and its exclusion from Operations & Maintenance expenses in Profit & Loss Account;
  - (d) Year wise asset register indicating capitalisation & depreciation as specified in the the appendix -2. ;
  - (e) Form 2.1 a;
  - (f) Allocation of capital cost/expense for various voltages.
  - (g) Allocation of assets/expenses for various categories of consumers.
  - (h) Break up of any surcharge collected with Tariff;
  - (i) Statement on source of financing and amortization of Regulatory Asset, wherever applicable, created through Revenue Gap.
  - (j) Loan utilisation certificate for all the loans availed by the licensee during the relevant year duly reconciled with statutory books of accounts including:
    - a) Capital Expenditure (CAPEX)
    - b) Capital Work in Progress (CWIP).
    - c) Working Capital
    - d) Regulatory Asset



**PART 4**

**PROCEDURE FOR TARIFF DETERMINATION**

**FILING OF PETITION FOR DETERMINATION OF TARIFF**

12. The Utility shall file a Petition for Business Plan, True up of ARR for previous years and determination of tariff in such form and in such manner as specified in Appendix -2 of this Regulation along with format showing detailed computations.
13. The Petition shall be accompanied by such fees as specified under *Delhi Electricity Regulatory Commission Comprehensive (Conduct of Business) Regulations, 2001*, as amended from time to time.
14. The Utility shall deliver a Presentation and submit the Executive Summary on the Tariff Petition before the Commission within a week of its submission.
15. Any Petition at variance or deficient with respect to these Regulations shall be returned to the Utility, for rectification and resubmission within the time specified in the communication by the Commission.
16. The Utility shall upload and maintain on its website the complete Tariff Petition as admitted by the Commission, in “downloadable format” showing detailed computations, filed before the Commission with a web-link for its easy accessibility for a period of at least 1(one) year after the date of issuance of the Tariff Order.  
  
Explanation— For the purpose of this Regulation, the term “downloadable format” shall mean all linked files containing assumptions, formulae, calculations, macros and outputs etc. forming the basis of the Petition.
17. The Utility shall provide a copy of the Tariff Petition to any interested party, against charges not exceeding the amount stipulated by the Commission from time to time.
18. The Utility shall, if so directed by the Commission, file e-Petition for determination of tariff. .

**PROCESS FOR DETERMINATION OF TARIFF AND ISSUANCE OF TARIFF ORDERS**

19. The Commission shall upload the Tariff Petitions along-with the Executive Summary on its website within 7 working days from the date of it's admission for information and seeking observations, suggestions and objections from the stakeholders including the consumers or consumer associations.

20. The Commission shall conduct prudence check of the claims made by the Utility and if so required, seek additional information, supporting documents, clarifications, etc.
21. The Commission shall issue the Tariff Order after considering the observations, suggestions and objections from any person and the response received thereof from the Utility.
22. The proceedings for determination of Tariff shall be in accordance with the *Delhi Electricity Regulatory Commission Comprehensive (Conduct of Business) Regulations, 2001*, as amended from time to time.
23. Notwithstanding anything contained in these Regulations, in the event of non filing of the Tariff Petition by the Utility, the Commission may initiate suo-motu proceedings for tariff determination.



**PART 5**  
**ARR COMPONENTS**

**CAPITAL COST**

24. The Capital Cost of a new project or scheme shall include the following:

- (1) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project or scheme as approved by the Commission;
- (2) Interest during construction and financing charges, on the loans being equal to debt as per financing excluding however the equity deployment, provided however the equity deployment shall not exceed 30 percent of the capital cost and in case equity is deployed in excess of 30 % the excess shall be deemed to be a debt or notional loan ;
- (3) Capitalized initial spares subject to the ceiling rates specified by the Commission;
- (4) Expenditure on account of additional capitalization determined in accordance with these Regulations;
- (5) Adjustment of revenue on account of sale of infirm power by Generating Entity in excess of fuel cost prior to the COD as specified under these Regulations; and
- (6) Adjustment of any revenue earned by the Utility, including by using the assets, before COD.

25. The Capital cost of an existing project or scheme shall include the following:

- (1) The trued-up capital cost excluding liability admitted by the Commission;
- (2) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these Regulation; and
- (3) Expenditure on account of renovation and modernisation as admitted by the Commission in accordance with these Regulations.

26. The capital cost incurred or projected to be incurred on account of any applicable PAT (Perform, Achieve and Trade) scheme of Government of India will be considered by the Commission on case to case basis and shall include:

- (1) Cost of plan proposed by developer in conformity with norms of PAT Scheme; and
- (2) Sharing of the benefits accrued on account of PAT Scheme.

27. The cost for the following shall be excluded or removed from the capital cost of the existing and new project or scheme as detailed out in Regulations 43 to 47 in these Regulations:

- (1) The assets forming part of the project or scheme, but not in use;
- (2) De-capitalized or retired asset.

28. Any grant or contribution or facility or financial support received by the Utility from the Central and/or State Government, any statutory body, authority, consumer or any other person, whether in cash or kind, for execution of the project or scheme, which does not involve any servicing of debt or equity or otherwise carry any liability of payment or repayment or charges shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation.

29. The following principles shall be adopted for approval of capital cost of any project or scheme:

(1) Prudence Check of capital cost considering:

- (a) The benchmark norms specified, if any, by the Commission from time to time,
- (b) Scrutiny of the capital expenditure, financing plan, interest during construction, incidental expenditure during construction for its reasonableness, use of efficient technology, cost over-run and time over-run,
- (c) Mode of procurement, and
- (d) Any other parameter considered appropriate by the Commission for determination of tariff.

(2) Capital cost over and above the specified benchmark norms, if any, may be considered based on reasons submitted by the Utility for exceeding the capital cost from benchmark norms to the satisfaction of the Commission on case to case basis.

#### **INTEREST DURING CONSTRUCTION (IDC)**

30. Interest during construction shall be computed corresponding to the loan as specified in Regulation 24(2) of these Regulations from the date of infusion of debt fund, and after taking into account the utilization of funds upto COD.

31. The Commission shall allow IDC based on the prudence check and subject to any conditions as may be prescribed by the Commission from time to time:

Provided that the Commission may allow IDC for any period of delay or part thereof, to the extent not attributable to the Utility, its suppliers or contractors or is resultant from a *force majeure* event.

#### **INCIDENTAL EXPENDITURE DURING CONSTRUCTION (IEDC)**

32. Incidental expenditure during construction shall be computed from the zero date and after taking into account the following:

- (1) Pre-operative expenses and additional expenditure when IDC is admissible necessary to be incurred upto COD as set out herein ;
- (2) Adjustment for any revenue earned during construction period up to COD on account of interest on deposits or advances;
- (3) Adjustment for any other receipts during construction.

33. In case of additional costs on account of IEDC due to delay in achieving the COD, the Utility shall be required to furnish detailed justification with supporting documents for such delay including the details of incidental expenditure during the period of delay and liquidated damages, if any, recovered or recoverable corresponding to the delay:

34. Any additional cost on account of IEDC due to delay in achieving the COD shall be examined by the Commission on case to case basis;

35. In case the time over-run beyond scheduled COD is not admissible after due prudence check, the increase of capital cost on account of cost variation corresponding to the period of time over-run shall be excluded from capitalization irrespective of price variation provisions in the contracts with supplier or contractor of the Utility.

36. No additional impact of time over-run or cost over-run shall be admissible on account of non-commissioning of the generating station or associated transmission system by scheduled COD, as the same should be recovered through Implementation Agreement between the generating company and the transmission licensee.

37. Initial spares shall be capitalized as a percentage of the Plant and Machinery cost upto cut-off date, subject to the norms specified in *CERC (Terms and Conditions of Tariff) Regulations, 2014* as amended from time to time for Generating Entity and Transmission Licensee:

Provided that the norms specified for capitalisation of initial spares for Transmission Licensee shall also be applicable *mutatis mutandis* to the Distribution Licensee.

#### **DEPOSIT SCHEME**

38. The project or scheme executed by the Utility after obtaining either full or part of the funds from the users/consumer/any other agency in the context of consumer contribution, deposit works, or grant received from the State and/or Central Governments, etc. shall be classified under Deposit Scheme.



39. Principles for treatment of the expenses on such capital expenditure shall be as follows:

- (1) Any unspent amount on account of deposit work and consumer contribution shall have to be refunded by the Utility:

Provided that no interest shall be levied on the unspent amount, if the unspent amount is refunded by the utility within 30 (thirty) days after CoD.

Provided further that interest at the rate of Bank Rate plus margin shall be levied on the unspent amount, if the unspent amount is refunded by the utility after 30 (thirty) days and upto 1 (one) year after CoD for the period between 31<sup>st</sup> day after CoD till date of refund.

Provided also that interest at the rate of 1.2 times of Bank Rate plus margin shall be levied on the unspent amount, if the unspent amount is refunded by the utility after 1 (one) year of CoD for the period between 31<sup>st</sup> day after CoD till date of refund.

- (2) Provided that any interest paid on this account shall not form part of the ARR;
- (3) Normative O&M expenses on the capital assets created through consumer contribution, deposit works and grant shall be allowed as specified in these Regulations;
- (4) Provisions related to Depreciation, Return on Equity and Interest on Loan shall not be applicable on such capital assets to the extent of financial support utilised through consumer contribution, deposit work and grant.

#### **ADDITIONAL CAPITALISATION**

40. The capital expenditure in respect of the new project or scheme or an existing project or scheme incurred or projected to be incurred, within the original scope of work, after the date of commercial operation and up to the cut-off date, as detailed in application for tariff determination, may be admitted by the Commission, subject to prudence check considering:

- (1) Un-discharged liabilities recognized to be payable at a future date;
- (2) Works deferred for execution;

- (3) Procurement of initial capital spares within the original scope of work;
- (4) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and
- (5) Change in law or compliance of any existing law;

41. The capital expenditure incurred or projected to be incurred in respect of the new project or scheme within the original scope of work after the cut-off date may be admitted by the Commission, subject to prudence check considering:

- (1) Liabilities to meet award of arbitration or for compliance of the Order or decree of a court of law;
- (2) Change in law or compliance of any existing law;
- (3) Deferred works relating to ash pond or ash handling system in the
- (4) original scope of work; and
- (5) Any liability for works executed prior to the cut-off date i.e., un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.

42. The capital expenditure, in respect of existing project/scheme, incurred or projected to be incurred after the cut-off date, may be admitted by the Commission, subject to prudence check considering:

- (1) Liabilities to meet award of arbitration or for compliance of the Order or decree of a court of law;
- (2) Change in law or compliance of any existing law;
- (3) Any expenses to be incurred on account of need for higher security and safety of the plant, as advised or directed by appropriate Government Agencies responsible for national security or internal security;
- (4) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (5) Any liability for works executed prior to the cut-off date after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;
- (6) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;

- (7) Any additional capital expenditure which has become necessary for efficient operation. The claim shall be substantiated with the technical justification and cost benefit analysis duly supported by the documentary evidence like test results in case of deterioration of assets, damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;
- (8) In case of transmission or distribution system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement due to system up-gradation or strengthening, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment and any other expenditure which has become necessary for successful & efficient operation of transmission or distribution system.

#### **DE-CAPITALISATION**

43. In case of de-capitalisation of asset, the original cost of such asset shall be deducted from the value of Gross Fixed Assets (GFA), on and from the date when that asset has been removed from GFA block and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year of de-capitalisation.
44. Loss or Gain due to de-capitalisation of asset based on the directions of the Commission or due to change in law or force majeure, which cannot be re-used, shall be adjusted in the ARR of the Utility in the relevant year.
45. Loss or Gain due to de-capitalisation of asset proposed by the Utility itself for the reasons not covered under Regulation 44 of these Regulations shall be to the account of the Utility.
46. Loss or Gain due to de-capitalisation of asset after the completion of useful life of asset shall be to the account of the Utility.
47. Principles for treatment of capital asset which has been removed from GFA before completion of its useful life with prior approval of the Commission and such removed asset is held in reserve for its reuse later shall be as follows:

- (1) In case the asset has been depreciated more than 70%, depreciation shall not be allowed on such asset from the date of de-capitalisation to the date such asset is put to re-use;
- (2) In case the asset has been depreciated less than 70%, depreciation shall be allowed upto 70% of the total value of asset from the date of de-capitalisation to the date such asset is put to re-use;
- (3) The Utility shall be allowed Carrying Cost, at the rate of interest for CAPEX Loan on written down value of such asset during the period from the date of de-capitalisation to the date such asset is put to re-use;
- (4) In case such asset has been put to re-use, differential of maximum permissible depreciation, as specified in the Appendix-1, and actual accumulated depreciation, shall be allowed from the date such asset is put to re-use;
- (5) The Utility shall be allowed Return on Equity, Interest on Loan on the written down value of the de-capitalised asset from the date such asset is put to re-use.

#### **RENOVATION AND MODERNISATION FOR LIFE EXTENSION**

48. The Utility shall file a Petition 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, and any other information considered to be relevant by the Utility for meeting the expenditure on renovation and modernization (R&M) for the purpose of extension of life beyond the originally recognized useful life as specified in Appendix - 1.
49. The Commission may grant approval for additional capital cost on account of renovation and modernization 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:

Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M expenses shall be suitably deducted after due prudence from the R&M expenditure to be allowed.

50. Any expenditure incurred or projected to be incurred and admitted by the Commission after prudence check based on the estimates of renovation and modernization expenditure and life extension, and after deducting the accumulated depreciation already recovered from the original project cost, shall form the basis for determination of tariff.

**SALE OF INFIRM POWER**

51. Supply of infirm power shall be accounted as deviation and shall be paid from the deviation settlement fund accounts:

Provided that any revenue earned by the Generating Entity from supply of infirm power after accounting for the fuel expenses shall be adjusted towards reduction in the capital cost.

**CAPITALISATION OF EXPENSES**

52. The ratio for allocation of overhead expenses incurred on account of Administrative Expenditure out of Operation and Maintenance Expenses for creation of Capital Asset shall be approved by the Commission in the Business Plan Order which shall form part of total capital expenditure of such Capital Asset.

**FOREIGN EXCHANGE RATE VARIATION**

53. The Utility may hedge foreign exchange exposure in respect of the interest on foreign currency loan and repayment of foreign loan availed for regulated business,
54. The Utility shall submit an application within thirty days before entering into such hedging transaction based on its approved hedging policy with details of foreign exchange loan and cost of hedging.
55. If the foreign currency loan is taken to reduce the cost of funding, the Utility shall be allowed to recover the cost of hedging of foreign exchange rate variation corresponding to the 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.
56. To the extent the Utility 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 in case it is not attributable to the Utility.



**RECOVERY OF COST OF HEDGING OR FOREIGN EXCHANGE RATE VARIATION**

57. In case of Generating Entity and transmission licensee, as the case may be, recovery of cost of hedging or foreign exchange rate variation shall be made directly by the Generating Entity or the transmission licensee, as the case may be, from the beneficiaries, without making any application before the Commission.

58. In case of any objections to the amounts claimed on account of cost of hedging or foreign exchange rate variation, the Generating Entity or the transmission licensee or beneficiaries, as the case may be, may make an appropriate application before the Commission for its decision.

59. In case of Distribution Licensee, recovery of cost of hedging or foreign exchange rate variation shall be allowed in the ARR of the licensee based on the prudence check in respective year.

**CAPITAL COST - VARIATION AND TREATMENT**

60. In case of the new projects/scheme, for the purpose of true up of Capital Cost, the Commission shall take into account the projected capital expenditure from the anticipated COD in accordance with these Regulations:

Provided that:

- (i) in case of a Generating Entity, if the date of commercial operation is delayed beyond 180 days from the date of issue of tariff order in terms of this Regulation, the tariff so granted shall be deemed to have been withdrawn and the Generating Entity shall be required to file a fresh Petition for determination of tariff after the date of commercial operation of the project/scheme;
- (ii) where the capital cost considered in tariff by the Commission on the basis of projected capital cost as on COD or the projected additional capital expenditure exceeds the actual capital cost incurred on year to year basis by more than 5%, the Utility shall refund to the beneficiaries the excess tariff recovered corresponding to such excess capital cost, as approved by the Commission along with interest at 1.20 times of the bank rate as prevalent on 1<sup>st</sup> April of respective year;
- (iii) The Utility shall file a supplementary Petition to the Commission, along with all supporting documents for consideration of any upward revision in the tariff, where the capital cost considered in tariff by the Commission on the basis of projected capital cost as on COD or the projected additional capital expenditure falls short of the actual capital cost incurred on year to year basis by more than 5%. The Utility shall be entitled to recover from



the beneficiaries for the shortfall in tariff corresponding to addition in capital cost, as approved by the Commission along with interest at 0.80 times of bank rate as prevalent on 1<sup>st</sup> April of respective year.

61. In case of the existing projects/scheme, the Utility, shall be allowed tariff by the Commission based on the admitted capital cost as on 1<sup>st</sup> April of the relevant year and projected additional capital expenditure for the respective years of the Control Period in accordance with the Regulation:

Provided that:

- (i) the Utility shall continue to bill the beneficiaries/consumers at the existing tariff approved by the Commission for the period starting from 1<sup>st</sup> April of new Control Period till approval of tariff by the Commission for new Control Period in accordance with these Regulations;
- (ii) where the capital cost considered in tariff by the Commission on the basis of projected capital cost as on COD or the projected additional capital expenditure submitted by the Utility, as the case may be, exceeds the actual capital cost incurred on year to year basis by more than 5%, the Utility shall refund to the beneficiaries/consumers, the excess tariff recovered corresponding to excess capital cost, as approved by the Commission along with interest at 1.20 times of the bank rate as prevalent on April 1 of respective year;
- (iii) The Utility shall file a supplementary Petition to the Commission, along with all supporting documents for consideration of any upward revision in the tariff, where the capital cost considered in tariff by the Commission on the basis of projected capital cost as on COD or the projected additional capital expenditure falls short of the actual capital cost incurred on year to year basis by more than 5%. The Utility shall be entitled to recover from the beneficiaries for the shortfall in tariff corresponding to addition in capital cost, as approved by the Commission along with interest at 0.80 times of bank rate as prevalent on 1<sup>st</sup> April of respective year.

#### **DEBT-EQUITY RATIO**

62. For determination of Tariff, the debt-equity ratio for any project or scheme under commercial operation shall be considered as 70:30:

Provided that:

- (i) Where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff;
- (ii) Where equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as notional loan;

- (iii) The equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;
- (iv) Any grant/contribution/deposit obtained for the execution of the project/scheme shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

63. The Utility shall submit the audited statement regarding infusion of equity made to meet the capital expenditure of the project or scheme.

**Return on Capital Employed (RoCE)**

64. Return on Capital Employed shall be used to provide a return to the Utility, and shall cover all financing costs, without providing separate allowances for interest on loans and interest on working capital.

65. The Regulated Rate Base (RRB) shall be used to calculate the total capital employed which shall include the Original Cost of Fixed Assets (OCFA) and Working Capital. Capital work in progress (CWIP) shall not form part of the RRB. Accumulated Depreciation, Consumer Contribution, Capital Subsidies / Grants shall be deducted in arriving at the RRB.

66. The RRB shall be determined for each year of the Control Period at the beginning of the Control Period based on the approved capital investment plan with corresponding capitalisation schedule and normative working capital.

67. The Regulated Rate Base for the  $i^{\text{th}}$  year of the Control Period shall be computed in the following manner:

$$RRB_i = RRB_{i-1} + \Delta AB_i / 2 + \Delta WC_i;$$

Where,

“i” is the  $i^{\text{th}}$  year of the Control Period;

$RRB_i$ : Average Regulated Rate Base for the  $i^{\text{th}}$  year of the Control Period;

$\Delta AB_i$ : Change in the Capital Investment in the  $i^{\text{th}}$  year of the Control Period.

This component shall be arrived as follows:

$$\Delta AB_i = Inv_i - D_i - CC_i - Ret_i;$$

Where,

$Inv_i$ : Investments projected to be capitalised during the  $i^{\text{th}}$  year of the Control Period and approved;

$D_i$ : Amount set aside or written off on account of Depreciation of fixed assets for the  $i^{\text{th}}$  year of the Control Period;

CC<sub>i</sub>: Consumer Contributions, capital subsidy / grant pertaining to the  $\Delta AB_i$  and capital grants/subsidies received during  $i^{th}$  year of the Control Period for construction of service lines or creation of fixed assets;

Ret<sub>i</sub>: Retirement / Decapitalisation during  $i^{th}$  Year;

RRB<sub>i-1</sub>: Closing Regulated Rate Base for the Financial Year preceding the  $i^{th}$  year of the Control period. For the first year of the Control Period, Closing RRB<sub>i-1</sub> shall be the Opening Regulated Rate Base for the Base Year i.e. RRB<sub>0</sub>;

$$RRB_0 = OCFA_0 - AD_0 - CC_0;$$

Where;

OCFA<sub>0</sub>: Original Cost of Fixed Assets at the end of the Base Year;

AD<sub>0</sub>: Amounts written off or set aside on account of depreciation of fixed assets pertaining to the regulated business at the end of the Base Year;

CC<sub>0</sub>: Total contributions pertaining to the OCFA<sub>0</sub>, made by the consumers, capital subsidy / grants towards the cost of construction of distribution/service lines by the Distribution Licensee and also includes the capital grants/subsidies received for this purpose;

$\Delta WC_i$ : Change in normative working capital requirement in the  $i^{th}$  year of the Control Period, from the  $(i-1)^{th}$  year. For the first year of the Control Period ( $i=1$ ),  $\Delta WC_1$  shall be taken as the normative working capital requirement of the first year.

68. Return on Capital Employed (RoCE) for the year “i” shall be computed in the following manner:

$$RoCE = WACC_i * RRB_i$$

Where,

WACC<sub>i</sub> is the Weighted Average Cost of Capital for each year of the Control Period;

RRB<sub>i</sub> – Average Regulated Rate Base for the  $i^{th}$  year of the Control Period.

69. The WACC for each year of the Control Period shall be computed at the start of the Control Period in the following manner:

$$WACC = \left[ \frac{D}{D + E} \right] * r_d + \left[ \frac{E}{D + E} \right] * r_e$$

Where,

**D** is the amount of Debt derived as per these Regulations;

**E** is the amount of Equity derived as per these Regulations;

Where equity employed is in excess of 30% of the capital employed, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as notional loan. The amount of equity in excess of 30% treated as notional loan. The interest rate on excess equity shall be the weighted average rate of interest on the actual loans of the Licensee for the respective years. Where actual equity employed is less than 30%, the actual equity and debt shall be considered;

Provided that the Working capital shall be considered 100% debt financed for the calculation of WACC;

**r<sub>d</sub>** is the Cost of Debt;

**r<sub>e</sub>** is the Return on Equity.

70. The Utility shall make every effort to refinance the loan so as to reduce the cost of financing, the net saving in ARR due to such reduced financing cost shall be shared with the consumers in the manner as specified in the Business Plan Order.

71. Tax on Return on Equity: The base rate of return on equity as approved by the Commission in the Business Plan Order shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid vis-à-vis total income of the Utility in the relevant financial year in line with the provisions of the relevant Finance Acts. The actual tax on other income stream shall not be considered for the calculation of "effective tax rate":

Provided that if the rate of return on equity for a Control Period is allowed on pre-tax basis, then income tax on the return on equity shall not be allowed separately as a pass through in ARR.

Provided further that no amount shall be considered towards tax exceeding the actual amount of tax paid by the Corporate entity of the Utility as an assessee.

72. Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where “t” is the effective tax rate in accordance with Regulation 71 and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid by the Utility on pro-rata basis by excluding the other income stream:

Provided that wherever the Utility pays Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.

#### **INTEREST ON LOAN**

73. The amount of loans arrived in the manner as indicated in Regulation 62 and 63 of these Regulations and the value of De-Capitalized Asset shall be considered as gross loan for calculation of interest on loan.

74. The loan outstanding as on 1<sup>st</sup> April of the respective year shall be worked out by deducting the cumulative repayment as admitted by the Commission from the gross loan.

75. The repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year irrespective of any moratorium period availed by the Utility;

76. The rate of interest on loan shall be based on weighted average rate of interest for actual loan portfolio subject to the maximum of bank rate as on 1<sup>st</sup> April of the year plus the margin as approved by the Commission in the Business Plan Order for a Control Period;

Provided that the rate of interest on loan approved by the Commission shall be trued up on the basis of the weighted average bank rate of the respective financial year;

Provided further that in no case the rate of interest on loan shall exceed approved rate of return on equity;

Provided also 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 also that if the Utility does not have actual loan then the bank rate shall be considered for the notional loan.

**DEPRECIATION**

77. Annual Depreciation shall be computed based on Straight Line Method for each class of asset as specified in appendix-1 of these Regulations.

78. The base value for the purpose of depreciation shall be the capital cost of the asset approved by the Commission. Depreciation shall be chargeable from the first year of commercial operation and in case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

79. 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:

Provided that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

80. Land other than the land held under lease shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

81. In case of existing assets, the balance depreciable value as on 1<sup>st</sup> April of any financial year shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31<sup>st</sup> March of the preceding financial year from the gross depreciable value of the assets.

82. The Depreciation for Life extension projects/scheme shall be allowed in the manner as indicated in Regulation 50 of these Regulations.

**INTEREST ON WORKING CAPITAL**

83. The Commission shall calculate the Working Capital requirement for:

(1) Coal-based generating stations as follows:

(a) Cost of coal for 15 days for pithead generating stations and 30 days for non-pithead generating stations for generation corresponding to the Normative Annual Plant Availability Factor or the maximum coal stock storage capacity whichever is lower;

(b) Cost of coal for 30 days for generation corresponding to the Normative Annual Plant Availability Factor;

(c) Cost of secondary fuel oil for two months for generation corresponding



to the Normative Annual Plant Availability Factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;

(d) Maintenance spares @ 20% of operation and maintenance expenses specified in these Regulations;

(e) O&M expenses for 1 month; and

(f) Receivables equivalent to 2 months of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor.

(1) Open-cycle Gas Turbine/Combined Cycle thermal generating stations as follows :

(a) Fuel Cost for 30 days corresponding to the Normative Annual Plant Availability Factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;

(b) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;

(c) Maintenance spares @ 30% of Operation and Maintenance expenses specified in this Regulation;

(d) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and

(e) Operation and maintenance expenses for one month.

(2) Transmission Licensee as follows:

(a) Receivables for two months towards transmission tariffs calculated on NATAF;

(b) Maintenance spares @ 15% of operation and maintenance expenses; and

(c) Operation and maintenance expenses for one month.

(3) Distribution Licensee as follows:

(i) Working capital for wheeling business of electricity shall consist of Receivables for two months of Wheeling Charges.

(ii) Working capital for Retail Supply business of electricity shall consist of:

(a) Receivables for two months of revenue from sale of electricity;

(b) Less: Power Purchase costs for one month;

(c) Less: Transmission charges for one month; and

(d) Less: Wheeling charges for two months.

84. Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1<sup>st</sup> April of the year plus margin as approved by the Commission for Control Period.

Provided that the rate of interest approved by the Commission shall be trued up on the basis of prevailing bank rate as on 1<sup>st</sup> April of the respective financial year.

85. Interest on working capital shall be payable on normative basis notwithstanding that the Utility has not taken loan for working capital from any outside agency.

#### **OPERATION AND MAINTENANCE (O&M) EXPENSES**

86. The Utilities shall be allowed Operation and Maintenance expenses on normative basis which shall be approved by the Commission in the Business Plan Order for the respective Control Period:

Provided that the Normative O&M expenses approved by the Commission for a Control Period shall not be trued up;

Provided further that statutory levy and taxes under O&M expenses indicated separately in the audited financial statement shall not form part of Normative O&M expenses.

87. The Commission shall approve the escalation to be allowed for adjustment towards increase in inflation, consumer price index (CPI), wholesale price index (WPI) etc. in the Business Plan Order for the respective Control Period on the basis of average increase in CPI and WPI during last five (5) completed Financial Years.

88. Normative Operation and Maintenance expenses of a new Generating Entity shall be as per the norms approved by the CERC in *Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014* as amended from time to time, for respective year unless specifically approved by the Commission.

89. The Commission shall approve Normative Operation and Maintenance expenses of existing Generating Entity in the Business Plan Order for the respective Control Period.

90. The Commission shall fix the target for Normative Operation and Maintenance expenses of the Transmission Licensee in the Business Plan Order for the respective Control Period.

91. Provided that the Commission may fix Normative Operation and Maintenance expenses target of a Transmission Licensee on the basis of number of Bays and Circuit Kilometres.

92. Normative Operation and Maintenance expenses of a Distribution Licensee shall consist of:

- (a) Employee Expenses,
- (b) Administrative and General Expenses; and
- (c) Repair and Maintenance Expenses.

93. Normative Operation and Maintenance expenses of a Distribution Licensee for a Control Period shall be derived on the basis of audited Operation and Maintenance expenses for last five (5) completed Financial Years vis-à-vis normative Operation and Maintenance expenses allowed by the Commission during the corresponding period based on the following parameters:

- (a) Load growth,
- (b) Consumer growth,
- (c) Commercial loss,
- (d) Distribution loss,
- (e) Inflation,
- (f) Efficiency and
- (g) Capital base.

#### **NON TARIFF INCOME**

94. The Utility shall submit forecast of Non-Tariff Income to the Commission, in such form as may be stipulated by the Commission from time to time, whose tentative list is as follows:

- (i) Income from rent of land or buildings;
- (ii) Income from sale of de-capitalised assets;
- (iii) Income from sale of scrap;
- (iv) Income from statutory investments;
- (v) Interest on delayed or deferred payment on bills;
- (vi) Interest on advances to suppliers/contractors;

- (vii) Rental from staff quarters;
- (viii) Rental from contractors;
- (ix) Income from Investment of consumer security deposit;
- (x) Income from hire charges from contractors and others;
- (xi) Income from advertisements, etc.:

95. The Non Tariff Income shall be reduced from ARR.

**OTHER BUSINESS INCOME**

96. The income from Other Business shall be calculated as per “DERC Treatment of Income from Other Business of Transmission Licensee and Distribution Licensee Regulation, 2005” as amended from time to time and shall be deducted from the ARR.

97. The Licensee shall follow segment wise reporting of other businesses in the audited financial statement and a reasonable basis for allocation of all joint and common costs between the licensed Business and the Other Business and shall submit the Allocation Statement as approved by the Board of Directors to the Commission along with his application for determination of tariff:

Provided that loss on account of Other Business shall not be considered in the ARR of the Licensee.

**Part 6**

**RECOVERY OF AGGREGATE REVENUE REQUIREMENT**

**GENERATING ENTITY**

98. The tariff for supply of electricity from a generating station shall comprise two parts, namely, Capacity Charge (for recovery of Annual Fixed Cost consisting of the components as specified in these Regulations) and Energy Charge (for recovery of primary and secondary fuel cost where applicable).

**Capacity Charge**

99. Computation of Capacity Charge to be raised as part of their bills for the Generating Stations:

- (a) The fixed cost of generating station shall be computed on annual basis, based on norms specified under these Regulations, and recovered on monthly basis under Capacity Charge. The total capacity charge payable for a generating station shall be shared by its beneficiaries as per their respective percentage share / allocation in the capacity of the generating station.
- (b) The capacity charge payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

$$CC_1 = (AFC/12)(PAF1 / NAPAF) \text{ subject to ceiling of } (AFC/12)$$

$$CC_2 = ((AFC/6)(PAF2 / NAPAF) \text{ subject to ceiling of } (AFC/6)) - CC_1$$

$$CC_3 = ((AFC/4) (PAF3 / NAPAF) \text{ subject to ceiling of } (AFC/4)) - (CC_1+CC_2)$$

$$CC_4 = ((AFC/3) (PAF4 / NAPAF) \text{ subject to ceiling of } (AFC/3)) - (CC_1+CC_2+CC_3)$$

$$CC_5 = ((AFC \times 5/12) (PAF5 / NAPAF) \text{ subject to ceiling of } (AFC \times 5/12)) - (CC_1+CC_2+CC_3+CC_4)$$

$$CC_6 = ((AFC/2) (PAF6 / NAPAF) \text{ subject to ceiling of } (AFC/2)) - (CC_1+CC_2+CC_3+CC_4+CC_5)$$

$$CC_7 = ((AFC \times 7/12) (PAF7 / NAPAF) \text{ subject to ceiling of } (AFC \times 7/12)) - (CC_1+CC_2+CC_3+CC_4+CC_5+CC_6)$$

$$CC_8 = ((AFC \times 2/3) (PAF8 / NAPAF) \text{ subject to ceiling of } (AFC \times 2/3)) - (CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7)$$

$$CC_9 = ((AFC \times 3/4) (PAF9 / NAPAF) \text{ subject to ceiling of } (AFC \times 3/4)) - (CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8)$$

$$CC_{10} = ((AFC \times 5/6) (PAF10 / NAPAF) \text{ subject to ceiling of } (AFC \times 5/6)) - (CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8+CC_9)$$

$$CC_{11} = ((AFC \times 11/12) (PAF11 / NAPAF) \text{ subject to ceiling of } (AFC \times 11/12)) - (CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8+CC_9+CC_{10})$$

$$CC_{12} = ((AFC) (PAFY / NAPAF) \text{ subject to ceiling of } (AFC)) - (CC_1+CC_2+CC_3+CC_4+CC_5+CC_6+CC_7+CC_8+CC_9+CC_{10}+CC_{11})$$

Provided that in case of generating station under shutdown due to Renovation and Modernisation, the Generating Entity shall be allowed to recover part of AFC which shall include O&M expenses and interest on loan only.

Where,

AFC Annual fixed cost specified for the year, in Rupees.

NAPAF = Normative annual plant availability factor in percentage.

PAFN = Percent Plant availability factor achieved upto the end of the nth month.

PAFY = Percent Plant availability factor achieved during the Year

CC<sub>1</sub>, CC<sub>2</sub>, CC<sub>3</sub>, CC<sub>4</sub>, CC<sub>5</sub>, CC<sub>6</sub>, CC<sub>7</sub>, CC<sub>8</sub>, CC<sub>9</sub>, CC<sub>10</sub>, CC<sub>11</sub> and CC<sub>12</sub> are the Capacity Charges of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> months respectively.

- (1) The PAFM up to the end of a particular month and PAFY shall be computed in accordance with the following formula:

$$\text{PAFM or PAFY} = \frac{10000 \times \sum_{i=1}^N \text{DC}_i}{\{N \times \text{IC} \times (100 - \text{AUX})\}} \%$$

Where,

AUX=Normative auxiliary energy consumption in percentage.

DC<sub>i</sub> = Average declared capacity (in ex-bus MW), for the i<sup>th</sup> day of the period i.e. the month or the year as the case may be, as certified by the concerned load dispatch centre after the day is over.

IC = Installed Capacity (in MW) of the generating station

N= Number of days during the period.

Note: DC<sub>i</sub> and IC shall exclude the capacity of generating units not declared under commercial operation. In case of a change in IC during the concerned period, its average value shall be taken.

100. Incentive to a generating station shall be payable at the rate specified in the Business Plan Order during the respective Control Period for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF).

### **Energy Charge**

101. The energy charge shall cover the primary and secondary fuel cost and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the energy charge rate of the month (with fuel and limestone price adjustment). Total Energy charge payable to the Generating Entity for a month shall be:

(Energy charge rate in Rs./kWh) x {Scheduled energy (ex-bus) for the month in kWh.}



102. Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

(a) For coal based stations:

$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSF_i + LC \times LPL\} \times 100 / (100 - AUX)$$

(b) For gas and liquid fuel based stations

$$ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF=(a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations

(b) Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based stations.

(c) In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio.

CVSF = Calorific value of secondary fuel, in kCal per ml.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LC = Normative limestone consumption in kg per kWh.

LPL = Weighted average landed price of limestone in Rupees per kg.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month. (In case of blending of fuel from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio)

SFC = Normative Specific fuel oil consumption, in ml per kWh.

LPSF<sub>i</sub> = Weighted Average Landed Price of Secondary Fuel in Rs./ml during the month

Provided that energy charge rate for a gas/liquid fuel based station shall be adjusted for open cycle operation based on certification of Member Secretary of respective Regional Power Committee for the open cycle operation during the month.

103. The Generating Entity shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel i.e., domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., as per the forms prescribed:

Provided that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and the weighted average GCV of the fuels as received shall also be provided separately, along with the bills of the respective month:

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, natural gas, RLNG, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the Generating Entity. The details should be available on its website on monthly basis for a period of three months.

104. The landed cost of fuel for the month shall include price of fuel corresponding to the grade and quality of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail / road or any other means, and, for the purpose of computation of energy charge, and in case of coal/lignite shall be arrived at after considering normative transit and handling losses as percentage of the quantity of coal or lignite dispatched by the coal or lignite supply company during the month as notified by the Central Electricity Regulatory Commission, for respective year unless specifically approved by the Commission;

Provided that any refund of taxes and duties along with any amount received on account of penalties from fuel supplier shall be adjusted in the fuel cost.

105. In case of part or full use of alternative source of fuel supply by coal based thermal generating stations other than as agreed by the Generating Entity and beneficiaries in their power purchase agreement for supply of contracted power on account of shortage of fuel or optimization of economical operation through blending, the use of alternative source of fuel supply shall be permitted to generating station:

Provided that in such case, prior permission from beneficiaries shall not be a precondition, unless otherwise agreed specifically in the power purchase agreement: Provided further that the weighted average price of use of alternative source of fuel shall not exceed 30% of base price of fuel;

Provided also that where the energy charge rate based on weighted average price of use of fuel including alternative source of fuel exceeds 30% of base energy charge rate as approved by the Commission for that year or energy charge rate based on weighted average price of use of fuel including alternative sources of fuel exceeds 20% of energy charge rate based on based on weighted average fuel price for the

previous month, whichever is lower shall be considered and in that event, prior consultation with beneficiary shall be made not later than three days in advance.

106. **Landed Fuel Cost for Tariff Determination:** The landed fuel cost of primary fuel and secondary fuel for tariff determination shall be based on actual weighted moving average cost of respective fuel before the start of the tariff period for existing and new generating stations.

107. Any variation in fuel prices on account of change in the Gross Calorific Value (GCV) of coal or gas or liquid fuel shall be adjusted on a monthly basis on the basis of average GCV of coal or gas or liquid fuel in stock, received and burnt and weighted average landed cost incurred by the Generating Entity for procurement of coal, oil, or gas or liquid fuel, as the case may be for a power station.

108. The Generating Entity shall separately indicate rate of energy charges in its bills at base price of primary and secondary fuel specified by the Commission and the fuel price adjustment. No separate petition needs to be filed with the Commission for fuel price adjustment.

109. The formula for fuel price adjustment for Generating Entity shall be indicated by the Commission in the Business Plan Order.

#### **TRANSMISSION LICENSEE**

110. The tariff for transmission of electricity shall comprise Capacity charge for recovery of annual fixed cost consisting of the components specified in these Regulations.

111. The annual fixed cost (AFC) of a transmission system (including communication system) shall consist of the following components as specified in these Regulations:

- (a) Return on Capital Employed;
- (b) Depreciation; and
- (c) Operation and Maintenance expenses.

**COMPUTATION OF TRANSMISSION CHARGE**

112. Annual Transmission Charges to be billed by the Transmission Licensee shall be computed in the Business Plan Order, in accordance with norms contained in these Regulations, aggregated as appropriate, and recovered on monthly basis as transmission charge from the users, who shall share these charges in the manner specified in these Regulations.

(a) Normative Annual Transmission System Availability Factor(NATAF): The Target Availability for recovery of full annual transmission charges for a Control Period shall be approved by the Commission before commencement of the Control Period;

Provided that Recovery of annual transmission charges below the target availability shall be on a pro rata basis.

113. The Transmission charge (inclusive of incentive) to be billed for a calendar month for transmission system or part shall be:

$$ARR \times (NDM / NDY) \times (TAFM / NATAF)$$

Where,

ARR = Aggregate Revenue Requirement specified for the year, in Rupees;

NATAF = Normative annual transmission availability factor, in per cent as approved by the Commission for a Control Period;

NDM = Number of days in the month;

NDY = Number of days in the year; and

TAFM = Transmission system availability factor for the month, in Percent,

114. The Transmission Licensee shall raise the bill for the transmission charge (inclusive of incentive) for a month based on its estimate of TAFM. Adjustments, if any, shall be made on the basis of the TAFM to be certified by the SLDC within 30 days from the last day of the relevant month.

**DISTRIBUTION LICENSEE**

115. The Aggregate Revenue Requirement for the Retail Supply and Wheeling Business of the Distribution Licensees for each year of the Control Period, shall contain the following items:

- (a) Cost of power procurement;
- (b) Transmission & Load Dispatch charges;
- (a) Operation and Maintenance expenses;
- (b) Return on Capital Employed;
- (c) Depreciation;
- (d) Income Tax;
- (e) Interest on Consumer Security Deposit;
- (f) Carrying Cost on Revenue Gap/Regulatory asset;

- (g) Less: Non-Tariff Income;
- (h) Less: Income from Other Business,
- (i) Less: Income from wheeling of electricity; and
- (j) Less: Receipts on account of charges other than Wheeling Charges from open access consumer.

116. The ratio of various ARR components as indicated in Regulation 115 of these Regulations, for segregation of ARR of the Distribution Licensee into Retail Supply and Wheeling Business shall be decided by the Commission in the Business Plan Order;

#### **COMPUTATION OF COST OF POWER PROCUREMENT**

117. Cost of power procurement in case of a Distribution Licensee shall be computed on the basis of quantum of power required to meet the demand in the licensed area of supply based on the sales forecast and distribution loss approved by the Commission for the relevant year;

118. Distribution Licensee shall be allowed to recover the net cost of power purchase from long term sources whose PPAs are approved by the Commission, assuming maximum normative rebate available from each source, for supply to consumers.

119. Distribution Licensee shall be allowed to recover the cost of power purchase under short term arrangements for the deficit in quantum of power requirement for sale in its area and power available through Long term sources as specified in Regulation 118 of these Regulations, such as Banking, Bilateral, Exchange, Inter DISCOM Transfer and Unscheduled Interchange etc.

120. While approving the cost of power purchase, the Commission shall determine the quantum of power to be purchased in accordance with:

- (1) Availability of Generating Stations which may be based on Load Generation Balance Report published by Central Electricity Authority (CEA) for relevant Financial Year, and;
- (2) Principles of merit order schedule and despatch based on the ranking of all approved sources of supply in the order of their variable cost of power purchase on monthly basis.



121. The Annual Fixed Cost of all approved Long Term sources as specified in Regulation 118 of these Regulations shall be allowed to be recovered in the ARR of the relevant Financial Year, however, Variable Cost shall be allowed to be recovered in the ARR on Merit Order basis as specified in Regulation 119 of these Regulations applicable.

122. To promote economical procurement of power as well as maximizing revenue from Sale of Surplus Power other than Banking Transactions, the Commission may specify the appropriate mechanism to incentivise/penalise the Distribution Licensee linked with the Power Exchange Rate:

Provided that the incentive arising on Sale Rate of Surplus Power over and above the Power Exchange Rate, shall be shared between Consumers and Distribution Licensee as specified by the Commission in the Tariff Order;

Provided further that any disincentive arising on Sale Rate of Surplus Power below the Power Exchange Rate shall be to the Distribution Licensee's account.

123. The cost of Renewable Purchase Obligation (RPO) of the Distribution Licensee shall be computed on the basis of approved cost of power procurement from renewable sources. In case of shortfall, if any, in procurement of power from renewable sources to meet the renewable purchase obligation, Distribution Licensee shall be allowed to recover the floor price of renewable energy certificate notified by Central Electricity Regulatory Commission for the relevant year:

Provided that the Commission will specify the targets for Solar and Non Solar RPO in the Business Plan Order;

Provided further that the Commission will specify the penalty for non fulfilment of RPO targets in the Tariff Order of the Distribution Licensee.

124. The Distribution Licensee shall be allowed to recover net transmission and load despatch charges payable to the Transmission Licensees (Central Transmission Utility, State Transmission Utility etc.) and System Operators (Regional Load Despatch Centre, State Load Despatch Centre etc.) for access to and use of the interstate transmission system, intra-state transmission system and availing load despatch services assuming maximum normative rebate available from each source for payment of bills in accordance with the tariffs approved from time to time by CERC and appropriate State Commissions, as the case may be.



125. The Distribution Licensee shall also be allowed to recover the Wheeling Charges in case the distribution network of other Distribution Licensee is used for procurement of power for the Retail Supply Business.
126. Interest paid on consumer security deposits shall be based on the rate specified by the Commission in the *"Delhi Electricity Supply Code and Performance Standards Regulations, 2007"* as amended from time to time, and shall be a pass through in the ARR.
127. Cross-Subsidy Surcharge and Additional Surcharge to be received by the Distribution Licensee shall be considered as revenue to meet the ARR of the Distribution Licensee.
128. The recovery of ARR for supply of electricity to be billed by the Distribution Licensees shall comprise of:
- (1) Fixed Charge, and;
  - (2) Variable Charge.
129. The Fixed Charge of the Distribution Licensee shall consist of the following components:
- (a) Capacity Charges of Generating Stations as approved/adopted by the appropriate Commission;
  - (b) Capacity Charges of Transmission Licensee including Load Dispatch Charges Stations as approved/adopted by the appropriate Commission;
  - (c) Fixed Cost of Distribution Licensee:
    - (i) Return on Capital Employed;
    - (ii) Depreciation; and
    - (iii) Operation and Maintenance expenses.
130. The Variable Charge of a Distribution Licensee shall consist of the following components:
- (a) Energy Charges (Power Purchase Cost excluding Capacity Charges);
  - (b) Trading Margin, if any, ; and
  - (c) Open Access Charges, if any.
131. The Commission shall design the Tariff Schedule, indicating Tariff for various categories of consumers in the area of the Distribution Licensee, in the relevant Tariff Order in order to enable recovery of ARR.

**TREATMENT OF DEMAND SIDE MANAGEMENT INITIATIVES**

132. The Utility shall submit the utilization of funds allocated for DSM schemes under DERC (Demand Side Management) Regulations, 2014:

Provided that the Utility shall maintain separate records of Revenue/Expenditure related to individual DSM schemes approved by the Commission.

**POWER PURCHASE COST ADJUSTMENT CHARGES**

133. The Distribution Licensee shall be allowed to recover the incremental Power Procurement Cost, over and above the Power Procurement Cost approved in the Tariff Order of the relevant year, incurred due to the following:

- (a) Variation in Price of Fuel from long term sources of Generation;
- (b) Variation in Fixed Cost on account of Regulatory Orders from long term sources of Generation;
- (c) Variation in Transmission Charges.

134. The Commission shall specify the detailed formula and procedure for recovery of such incremental Power Procurement Cost as Power Purchase Cost Adjustment Charges (PPAC) formula in the Tariff Order;

135. The Commission may take appropriate view to carry forward or spread part of PPAC of one quarter in the subsequent quarters;

**PART 7**

**NORMS OF OPERATION AND TRUING UP**

136. Recovery of capacity charge, energy charge, transmission charge and incentive by the Utility shall be based on the achievement of the operational norms specified by the Commission;
137. Norms of operation for generating station: Norms of operation for new generating stations shall be based on Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for respective year unless specifically approved by the Commission;
138. Norms of operation for existing generating stations to be approved by the Commission in the Business Plan Order shall consist of following parameters:
- (a) Normative Annual Plant Availability Factor (NAPAF),
  - (b) Normative Annual Plant Load Factor (NAPLF),
  - (c) Gross Station Heat Rate,
  - (d) Secondary Fuel Oil Consumption for Coal based generating stations, and
  - (e) Auxiliary Energy Consumption
139. Norms of operation for Transmission licensee to be approved by the Commission in the Business Plan Order shall be based on NATAF.
140. Norms of operation for Distribution Licensee to be approved by the Commission in the Business Plan Order shall consist of following parameters:
- (a) Distribution Loss target
  - (b) Collection Efficiency target
  - (c) Normative Operation and Maintenance expenses

**TRUING UP MECHANISM**

141. The Commission shall carry out truing up exercise for the previous years along-with the tariff petition, with respect to the capital expenditure including additional capital expenditure incurred, as admitted by the Commission after prudence check at the time of truing up:
142. The Commission shall carry out truing up of tariff based on the performance for generating stations and taking into account of the following Uncontrollable parameters:
- i) Force Majeure;
  - ii) Change in Law;

- iii) Re-financing of Loan; and
- iv) Primary Fuel Cost.

143. The Commission shall carry out truing up of tariff of transmission licensee based on the performance of following Uncontrollable parameters:

- (i) Force Majeure;
- (ii) Change in Law; and
- (iii) Re-financing of Loan.

144. The financial gains to a generating company or the transmission licensee, as the case may be, on account of normative parameters shall be shared between generating company/transmission licensee and the beneficiaries on monthly basis with annual reconciliation.

145. The financial gains in case of generating station or transmission licensee, as the case may be, on account of operational parameters shall be shared in the ratio as specified by the Commission in the Business Plan Order.

Where after the truing up, the tariff recovered varies from the tariff approved by the Commission, the generating company or the transmission licensee, as the case may be, shall refund/recover with simple interest to the beneficiaries or the long term transmission customers /DICs, as the case may be, the excess amount so recovered.

146. The financial gains and losses by a generating company or the transmission licensee, as the case may be, on account of uncontrollable parameters other than capitalisation shall be passed on to beneficiaries of the generating company or to the long term transmission customers of transmission system, as the case may be.

Provided that the amount under-recovered or over-recovered, along with simple interest at the rate equal to the bank rate as on 1<sup>st</sup> April of the respective year, shall be recovered or refunded by the generating company or the transmission licensee, as the case may be, in six equal monthly instalments starting within three months from the date of the tariff order issued by the Commission.

147. True up of ARR for Distribution (Wheeling & Retail Supply) Licensee shall be conducted on the following principles:

- (a) Variation in revenue and sales of the distribution licensee based on projected revenue and sales vis-a-vis actual revenue and sales;

- (b) Variation in long term power purchase quantum and cost of the distribution licensee based on merit order dispatch principle of projected long term power purchase quantum and cost vis-a-vis actual long term power purchase quantum and cost.
- (c) Variation in short term power purchase quantum and cost of the distribution licensee based on projected short term power purchase quantum and cost vis-a-vis actual short term power purchase quantum and cost:

Provided that Trading Margin, Transmission Charges and Transmission Losses incurred on Forward And Reverse transaction in the same time slot executed within three months for Forward / Reverse power procurement/sale through Banking And Bilateral shall not be allowed in the Power Purchase Cost of the Distribution Licensee;

Provided that Sale through UI transactions on monthly basis shall be limited to the contingency limit as specified by the Commission in the Business Plan Order in order to promote Grid Discipline and optimise Power Purchase Cost;

Provided that any Additional/Penal UI Charges paid by the Distribution Licensee shall not be allowed in Power Purchase Cost;

Provided that Short-term arrangement or agreement, other than traded through Power Exchange, for procurement/sale of power has to be executed through a transparent process of open tendering and competitive bidding guidelines issued by Ministry of Power (MoP) as amended from time to time, unless specific guidelines issued by the Commission;

Provided further that in case the Distribution Licensee does not follow Short Term Power guidelines for procurement of power/sale the rate of such power procurement shall be restricted to the average rate of power purchase/sale through exchange during same month for Delhi region.

- (d) Any surplus or deficit on account of controllable parameters i.e., Operation and Maintenance (O&M) expenses, Working Capital shall be to the account of the Licensee and shall not be trued up in ARR; and
- (e) Depreciation, Return on equity and interest on loan shall be trued up every year based on the actual capitalisation vis-à-vis capital investment plan (capitalisation) approved by the Commission:

Provided further that the Commission shall true up the interest rate on the basis of increase/decrease in State Bank of India Base Rate as on April 1 of the relevant financial year vis-a-vis State Bank of India Base Rate as on April 1 of the immediately preceding financial year;

148. The actual expenditure vis-a-vis projected expenditure incurred on Demand Side Management in the ARR shall be trued up.

#### **REGULATORY ASSETS**

149. The accumulated revenue gap approved by the Commission in the relevant Tariff Order shall be treated as Regulatory Assets:

Provided that revenue gap shall be computed on the basis of excess of ARR over Revenue approved after true up of the relevant financial year;

150. The Regulatory Asset, if any, shall be indicated in the books of accounts as follows:

- (a) The total amount of outstanding Regulatory Asset at the end of the year shall be indicated, as a separate entry, under the Assets side of the Accounts.
- (b) The period of amortisation of the Regulatory Asset and the carrying cost of the Regulatory Asset (if stipulated by the Commission in the Tariff Order or any other Order in this regard) shall be explained under the Notes to the Accounts.
- (c) For every year of amortisation, the amount of Regulatory Asset amortised during the year as approved by the Commission and the carrying cost allowed by the Commission on the balance Regulatory Asset shall be indicated under the Revenue side, once the Utility is allowed to bill the same to the consumers.

#### **DEVIATION CHARGES**

151. Variations between actual injection of Energy and scheduled injection of Energy for the generating stations, and variations between actual drawal of Energy and scheduled drawal of Energy for the beneficiaries shall be treated as their respective deviations and charges for such deviations shall be governed by the *Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2014*, as amended from time to time.



152. The Utility shall be subject to incentive or dis-incentive, as the case may be, based on the performance vis-à-vis target achieved by the respective Utility.

(a) In case of a Generating Entity incentive/penalty shall be applicable on the basis of actual performance on account of NAPAF and NAPLF as discussed in these Regulations.

(b) In case of a transmission licensee incentive/penalty shall be applicable on the basis of actual performance on account of NATAF as discussed in these Regulations.

(c) In case of a Distribution Licensee incentive/penalty shall be applicable on the basis of :

- (i) Distribution Loss; and
- (ii) Collection Efficiency

153. The Commission may specify additional controllable performance parameter/(s) in the Business Plan Order for increasing the efficiency and evolve mechanism for incentivising/penalising the Utility based on actual performance.

**TREATMENT OF DISTRIBUTION LOSS AND COLLECTION EFFICIENCY**

154. Target for Distribution loss reduction shall be fixed for a Control Period in the Business Plan Order based on factors including previous targets and past performance.

155. The financial impact on account of over or under achievement of Distribution Loss target shall be computed as under:

$$\text{Incentive or (Penalty)} = Q1 * (L1 - L2) * P * 10^6$$

where,

Q1 = Actual quantum of Energy purchased at Distribution periphery in MU;

L1 = Distribution Loss Target in %;

P = Trued up Average Power Purchase Cost (APPC) per unit at Distribution periphery in Rs./kWh;

$$L2 \text{ (Actual Distribution Loss in \%)} = \left[ 1 - \frac{Q2}{Q1} \right] * 100;$$

Q2 = Actual quantum of Energy Billed in MU.

156. Any financial impact on account of overachievement with respect to Distribution Loss target shall be shared between the Distribution Licensee and the consumer in the ratio as specified in the Business Plan Order.

157. Any financial impact on account of underachievement with respect to Distribution Loss targets shall be to the Distribution Licensee's account.

158. Target for Collection Efficiency shall be fixed on the basis of actual performance, past targets and other relevant factors/measures/information of the Distribution Licensee for a Control Period in the MYT Order;

159. The financial impact on account of over or under achievement of Collection Efficiency target shall be computed as under:

$$\text{Incentive or (Penalty)} = (C1 - C2) * A_b$$

where,

$$C1 \text{ (Actual Collection Efficiency)} = \left[ 1 - \frac{A_r}{A_b} \right] * 100$$

$A_r$  = Actual amount collected excluding electricity duty, late payment surcharge, any other surcharge in Rs. Cr.;

$A_b$  = Actual amount billed excluding electricity duty, late payment surcharge, any other surcharge in Rs. Cr.;

$C2$  = Target Collection Efficiency in %;

160. Any financial impact on account of underachievement less than the target and overachievement above 100% with respect to Collection Efficiency targets shall be to the Licensee's account.

161. Provided that any financial impact on account of over achievement over and above the target and limited to 100% with respect to Collection Efficiency targets shall be shared in the ratio of 50:50 between the Distribution Licensee and the Consumers.

**PART 8**

**MISCELLANEOUS**

162. **Issue of Orders and Practice Directions:** Subject to the provision of the Act and these Regulations, the Commission may, from time to time, issue Business Plan, Tariff Orders and Practice directions in regard to the implementation of these Regulations and procedure to be followed on various matters, which the Commission has been empowered by these Regulations to direct, and matters incidental or ancillary thereto.
163. The Commission, if required at appropriate stage, may specify other charge for Generating Entity or Transmission Licensee or Distribution Licensee.
164. Notwithstanding anything contained in these Regulations, the Commission shall have the authority, either suo-motu or on a Petition filed by any interested or affected party, to determine the tariff of any Licensee.
165. **Powers to remove difficulties:** If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by a general or special order, not being inconsistent with the provisions of these Regulations or the Act, do or undertake to do things or direct the Licensee to do or undertake such things which appear to be necessary or expedient for the purpose of removing the difficulties.
166. **Power of Relaxation:** The Commission may in public interest and for reasons to be recorded in writing, relax any of the provision of these Regulations.
167. **Interpretation:** If a question arises relating to the interpretation of any provision of these Regulations, the decision of the Commission shall be final.
168. **Saving of Inherent Powers of the Commission:** 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 the special circumstances of the matter or class of matters and for reasons to be recorded in writing, deems it necessary or expedient to depart from the procedure specified in these Regulations.

169. **Enquiry and Investigation:** All enquiries, investigations and adjudications under these Regulations shall be done by the Commission through the proceedings in accordance with the provisions of the Conduct of Business Regulations.
170. **Power to Amend:** The Commission, for reasons to be recorded in writing, may at any time vary, alter or modify any of the provision of these Regulations by amendment.



**Appendix-1  
DEPRECIATION SCHEDULE**

Sr. No.	Asset Particulars	Useful Life (years)	Depreciation Rate for 12 years	Depreciation Rate Beyond 12 years till Useful Life
		A	B	$C=[90\%-(A*B)]/(A-12)$
<b>1</b>	<b>Land owned under full title</b>	<b>Infinity</b>		
<b>2</b>	<b>Land held under lease</b>			
(A)	For investment in land	The period of lease or the period remaining unexpired on the Assignment of the lease	Rate based on the period of lease	
(B)	For cost of clearing site	The period of lease remaining unexpired at the date of clearing the site		
<b>3</b>	<b>Assets Purchased New</b>			Depreciation Rate shall be computed based on the balance depreciable value spread over remaining Useful Life of asset
(A)	Plant and machinery in generating stations including plant foundations			
(i)	Steam-electric NHRS & Waste Heat Recovery Boilers / Plants	<b>25</b>	<b>5.83</b>	
(ii)	Diesel electric & gas plant	<b>25</b>	<b>5.83</b>	
(B)	<b>Cooling towers and circulating water systems</b>	<b>25</b>	<b>5.83</b>	
(C)	Buildings			
(i)	<b>Offices &amp; showrooms</b>	<b>60</b>	<b>1.50</b>	
(ii)	<b>Buildings other than Offices &amp; showrooms</b>	<b>30</b>	<b>3.00</b>	

Sr. No.	Asset Particulars	Useful Life (years)	Depreciation Rate for 12 years	Depreciation Rate Beyond 12 years till Useful Life
		A	B	$C = [90\% - (A \times B)] / (A - 12)$
	Temporary erection such as wooden structures	0.00	100	Depreciation Rate shall be computed based on the balance depreciable value spread over remaining Useful Life of asset
	Roads other than Kutcha roads	27	3.34	
	Others	30	3.00	
(D)	Transformers, Kiosk, sub-station equipment & other fixed apparatus (including plant foundations)	25	5.83	
(E)	Switchgear including cable connections	25	5.83	
(F)	Lightning arrestor			
(i)	Station type	25	5.83	
(ii)	Pole type	25	5.83	
(iii)	Synchronous condenser	25	5.83	
(G)	Batteries including Cabling, joint boxes	25	5.83	
(H)	Overhead lines including cable supports	25	5.83	
(I)	Meters	15	6.00	
(j)	Vehicles	10	9.00	
(K)	Air Conditioning Plants			
(i)	Static	25	5.83	
(ii)	Portable	10	9.00	



Sr. No.	Asset Particulars	Useful Life (years)	Depreciation Rate for 12 years	Depreciation Rate Beyond 12 years till Useful Life
		A	B	$C = [90\% - (A \times B)] / (A - 12)$
(L)	Office furniture and related equipments	10	9.00	
(M)	Communication equipment			
(i)	Radio and high frequency carrier system	18	5.00	
(ii)	Telephone lines and telephones	18	5.00	
(N)	I. T Equipment including software	6	15.00	Depreciation Rate shall be computed based on the balance depreciable value spread over remaining Useful Life of asset
	Any other assets not covered above	As per Companies Act 2013 amended from time to time.		