

**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION  
(MULTI YEAR TARIFF) REGULATIONS, 2019**

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**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION  
(MULTI YEAR TARIFF) REGULATIONS, 2019**

**ELECTRICITY ACT, 2003.**

No. MERC/Tech/Regulation/2019/471.- In exercise of the powers conferred by clause (h), (i), (j), (l), (m), (o), (y), (zd), (ze), (zf), (zg), (zh) and (zp) of sub-section (2) of Section 181 read with the proviso to sub-section (1) of Section 36, sub-clause (ii) of clause (d) of sub-section (2) of Section 39, second proviso to sub-clause (ii) of clause (d) of sub-section (2) of Section 39, sub-clause (ii) of clause (c) of Section 40, second proviso to sub-clause (ii) of clause (c) of Section 40, first proviso to Section 41, first proviso to Section 51, Section 61, sub-sections (2) and (5) of Section 62, sub-sections (1) and (3) of Section 64, Section 65 and clause (b) of sub-section (1) of Section 86 of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in that behalf, the Maharashtra Electricity Regulatory Commission hereby makes the following Regulations. These Regulations supersede the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015.

**1 Short title, extent, applicability and commencement**

- 1.1 These Regulations may be called the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2019.
- 1.2 These Regulations shall extend to the whole of the State of Maharashtra.
- 1.3 These Regulations shall be applicable to existing and future Generation Companies, Transmission Licensees, Distribution Licensees, Maharashtra State Load Despatch Centre (MSLDC), and their successors for determination of Aggregate Revenue Requirement, Tariff, and Fees and Charges of MSLDC in all matters covered under these Regulations from April 1, 2020 up to March 31, 2025.
- 1.4 These Regulations shall come into force from the date of their publication in the Official Gazette:

Provided that for all purposes, including review matters pertaining to the period till March 31, 2020, the issues relating to determination of Aggregate Revenue Requirement and Tariff shall be governed by the provisions of the Maharashtra Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2005 or Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2011, or Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015, including amendments thereto, as may be applicable.

## 2 Definitions

2.1 In these Regulations, unless the context otherwise requires:

- (1) **“Accounting Statement”** means for each Year, the following statements, namely-
  - (i) balance sheet, prepared in accordance with the format prescribed by the Commission from time to time, with reference to each licensed or regulated business separately, duly certified by the statutory auditors;
  - (ii) profit and loss account, prepared in accordance with the format prescribed by the Commission from time to time, with reference to each licensed or regulated business separately, duly certified by the statutory auditors;
  - (iii) cash flow statement, prepared in accordance with the format prescribed by the Commission from time to time, with reference to each licensed or regulated business separately, duly certified by the statutory auditors;
  - (iv) balance sheet, prepared in accordance with the form contained in the Companies Act, 1956 or Companies Act, 2013, as applicable;
  - (v) profit and loss account, complying with the requirements contained in the Companies Act, 1956 or Companies Act, 2013, as applicable;
  - (vi) cash flow statement, prepared in accordance with the applicable Accounting Standards of the Institute of Chartered Accountants of India;
  - (vii) report of the statutory auditors;
  - (viii) reconciliation statement, duly certified by the statutory auditors, showing the reconciliation between the total expenses, revenue, assets and liabilities, of the entity as a Company and the expenses, revenue, assets and liabilities, separately for each business regulated by the Commission and unregulated business operations;
  - (ix) cost records prescribed by the Central Government under the Companies Act, 1956 or Companies Act, 2013, as applicable;

together with notes thereto, and such other supporting statements and information as the Commission may direct:

Provided that separate Accounting Statements shall be prepared and submitted to the Commission for each licensed Business in accordance with the Licence conditions, and for each regulated Business:

Provided further that, in case separate Accounting Statements are not submitted for each licensed Business in accordance with the Licence conditions and for each

regulated Business for the Financial Year (FY) 2020-21 onwards, the Petitions filed by the Generating Company or Licensee or MSLDC, may be rejected by the Commission after giving the Petitioner a reasonable opportunity of being heard:

Provided also that the Generating Company or Licensee or MSLDC shall submit the Statutory Auditor's comments, observations and notes to Accounts, along with the Accounting Statements, and a summary of the key issues highlighted by the Statutory Auditor and the steps taken to address them:

Provided also that, in respect of a Local Authority engaged in the business of distribution of electricity, the Accounting Statement shall mean the items mentioned above as prepared and maintained in accordance with the relevant statutes applicable to such Local Authority:

Provided also that till the MSLDC remains a part of it, separate books of accounts for MSLDC shall be maintained by the Maharashtra State Electricity Transmission Company Limited and shall be audited and certified by the statutory auditor;

- (2) “**Act**” means the Electricity Act, 2003 (36 of 2003), as amended from time to time;
- (3) “**Aggregate Revenue Requirement**” means the revenue requirement comprising allowable expenses and return on capital pertaining to the Generating Company, Transmission Licensee or Distribution Licensee or MSLDC, to be recovered through Tariff or Fees and Charges in accordance with these Regulations;
- (4) “**Allocation Statement**” means, for each Year, a statement in respect of each of the Other Businesses of the Generating Company or Transmission Licensee or Distribution Licensee undertaken for optimum utilisation of its assets, showing the amounts of any revenue, cost, asset, liability, reserve or provision, etc., which has been charged from or to each such Other Business together with a description of the basis of that charge; or determined by apportionment or allocation between different Businesses of the Generating Company or Licensee, together with a description of the basis of the apportionment or allocation:

Provided that, for the purposes of these Regulations, the licensed Business of a Distribution Licensee for its area of supply would be bifurcated into Distribution Wires Business and Retail Supply Business:

Provided further that such allocation statement in respect of a Generating Station owned and/or maintained and/or operated by a Distribution Licensee shall be prepared such as to enable Tariff determination, stage-wise, Unit-wise and/or for the entire Generating Station;

- (5) “**Allotted Capacity**” shall have the same meaning as in the Regulations of the Commission governing Transmission Open Access or Distribution Open Access, as may be applicable;
- (6) “**Auditor**” means an auditor appointed by the Generating Company or Licensee or MSLDC qualified for such appointment in accordance with the relevant provisions of the Companies Act;
- (7) “**Auxiliary Energy Consumption**” in relation to a period, in case of a generating Station or Unit, means the quantum of energy consumed by its auxiliary equipment, such as equipment used for operating plant and machinery, including switchyard of the generating Station and the transformer losses within the generating Station, and shall be 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 it shall not include energy consumed for supply of power by the generating Station to its housing colony and other facilities, and for construction works at the generating Station;

- (8) (a) “**Availability**” in relation to a thermal Generating Station/Unit for any period means the average of the daily average declared capacities as certified by MSLDC for all the days during that period, expressed as a percentage of the installed capacity of the Generating Station/Unit minus the normative auxiliary consumption in Megawatts (MW), as specified in these Regulations, and shall be computed in accordance with the following formula:

$$\text{Availability} = 100 \times \frac{\sum_{i=1}^N \text{DC}_i}{\{ N \times \text{IC} \times (1 - \text{AUX}_n) \}} \%$$

where - N = number of time blocks in the given period

DC = Average Declared Capacity in MW for the <sup>i</sup>th time block in such period

IC = Installed Capacity of the Generating Station/Unit in MW

AUX = Normative Auxiliary Consumption in MW, expressed as a percentage of gross generation:

Provided that Availability of a thermal Generating Station/Unit for any period shall not exceed hundred per cent;

(b) “**Availability**” in relation to a transmission system for a given period means the time in hours during that period for which the transmission system is capable of transmitting electricity at its rated voltage, expressed in percentage of total hours in the given period, and shall be computed as provided in **Annexure-II** to these Regulations:

Provided that Availability of a transmission system for any period shall not exceed hundred per cent;

(9) “**Balancing and Settlement Code**” means such Code as may be stipulated by the Commission, or by the MSLDC with the approval of the Commission, for the balancing of energy accounts and settlement of differences among the users of the grid in the State of Maharashtra;

(10) “**Bank Rate**” shall mean the Bank Rate as declared by the Reserve Bank of India from time to time;

(11) “**Base Rate**” shall mean the one-year Marginal Cost of Funds-based Lending Rate (‘MCLR’) as declared by the State Bank of India from time to time;

(12) “**Beneficiary**” shall mean

- a. in relation to a Generating Station, the purchaser of electricity generated at such Station whose Tariff is determined under these Regulations;
- b. in relation to a Transmission Licensee, the Transmission System Users;
- c. in relation to the Distribution Wires Business, the Generating Companies connected to the distribution system and consumers;
- d. in relation to the Retail Supply Business, the consumers;
- e. in relation to the MSLDC, the Distribution Licensees and Open Access consumers who utilise the Intra-State Transmission system for transmission of electricity and / or utilise the distribution system of a Licensee in the State for wheeling of electricity and / or avail the services of the MSLDC relating to scheduling and real-time grid operations, State energy accounting, operation of pool account, etc.:

- (13) “**Block**” in relation to a combined cycle thermal Generating Station includes combustion turbine – generators, associated waste heat recovery boilers, connected steam turbine – generators and auxiliaries;
- (14) “**Bulk Power Transmission Agreement**” means an executed Agreement that contains the terms and conditions under which a Transmission System User is entitled to access to an intra-State transmission system of a Transmission Licensee;
- (15) “**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 of any condition or covenant by any competent statutory authority in relation to any consent or clearances or approval or Licence available or obtained for the Project; or
  - e. any change in taxes or duties, or introduction of any taxes or duties levied by the Central or any State Government.
- (16) “**Charges**” means payments to be collected by the Generating Company or Licensee or MSLDC for the services rendered by it;
- (17) “**Coincident Peak Demand**” means the demand as measured at G-T interface for the Distribution Licensee occurring at the time of system peak demand for the State;
- (18) “**Commission**” means the Maharashtra Electricity Regulatory Commission;
- (19) “**Competitive Bidding**” means a transparent process for procurement of power, equipment, services and works in which bids are invited by the procurer by open advertisement covering the scope and specifications of the power requirement, equipment, services and works required, and the terms and conditions of the proposed contract as well as the criteria by which bids shall be evaluated, and shall include domestic competitive bidding and international competitive bidding;
- (20) “**Conduct of Business Regulations**” means the Regulations of the Commission governing its Conduct of Business;

(21) “**Contracted Capacity**” means the capacity in MW contracted by a long-term Transmission System User as part of its long-term power procurement plan through a power purchase agreement or arrangement, and shall be equivalent to the deemed Transmission Capacity Right of a Transmission System User as specified under the Regulations of the Commission governing Transmission Open Access;

(22) “**Control Period**” means the period comprising five Years from April 1, 2020 to March 31, 2025, and as may be extended by the Commission;

(23) “**Cut-off Date**” means the last day of the calendar month after thirty-six months from the date of commercial operation of the project;

(24) “**Day**” means the 24-hour period starting at 0000 hour;

(25) “**Date of Commercial Operation**” or “**COD**” means -

- a. in case of a generating Unit or block of a thermal generating Station, the date declared by the Generating Company after demonstrating the maximum continuous rating (MCR) or the installed capacity (IC) through a successful trial run after notice to the Beneficiaries, if any; 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, where arrangements have been entered into with Beneficiaries for purchasing power from the generating Station, the trial run shall commence after seven days’ notice by the Generating Company to the Beneficiaries, and scheduling shall commence from 0000 hour after completion of the trial run;

Provided further that the Generating Company shall certify that the generating Station meets the technical standards specified by the Central Electricity Authority and the State Grid Code;

- b. in case of a generating Unit of a hydel generating Station, including pumped storage hydel generating Station, the date declared by the Generating Company from 0000 hour, and in relation to the generating Station as a whole, the date declared by the Generating Company after demonstrating peaking capability corresponding to the installed capacity of the generating Station through a successful trial run:

Provided that, where arrangements have been entered into with Beneficiaries for purchasing power from a generating Station, the scheduling process for a Unit of the generating Station or demonstration of peaking capability corresponding to installed capacity of the generating Station through a successful trial run shall commence after seven days' notice by the Generating Company to the Beneficiaries and scheduling shall commence from 0000 hour after completion of the trial run;

Provided further that the Generating Company shall certify that the generating Station meets the technical standards specified by the Central Electricity Authority and the State Grid Code;

Provided also that, in case a hydel generating Station with pondage or storage is not able to demonstrate peaking capability corresponding to the installed capacity for the reason of insufficient reservoir or pond level, the date of commercial operation of the last Unit of the generating Station shall be considered as the date of commercial operation of the generating Station as a whole, and it will be mandatory for such hydel generating Station to demonstrate peaking capability equivalent to installed capacity of the generating Unit or the generating Station as and when such reservoir or pond level is achieved:

Provided also that, if a run-of-river hydel generating Station or a generating Unit thereof is declared under commercial operation during lean inflows period when the water inflow is insufficient for such demonstration of peaking capability, such hydel generating Station or generating Unit shall demonstrate peaking capability equivalent to installed capacity as and when sufficient water inflow is available;

- c. in case of a transmission system, the date declared by the Transmission Licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal:

Provided that, in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the Transmission Licensee or its suppliers or contractors but on account of the delay in commissioning of the concerned generating Station or the upstream or downstream transmission system or distribution system, the Transmission Licensee may seek approval

of the Commission of the date of commercial operation of such transmission system or an element thereof:

Provided further that, in case of an existing Transmission Licensee, such request may be included as part of its Multi Year Tariff (MYT) Petition or Mid-Term Review Petition or True-up Petition to be filed under these Regulations;

- (26) "**De-capitalisation**" means the reduction in Gross Fixed Assets corresponding to the removal of assets as approved by the Commission;
- (27) "**Declared Capacity**" means, in relation to a generating Station, the capability to deliver ex-bus electricity in MW declared by such generating Station in respect of any time-block of the day as defined in the State Grid Code or whole of the day, taking into account the availability of fuel and/or water, and subject to further qualification in the relevant Regulation;
- (28) "**Deemed Distribution Licensee**" means a person deemed to be a Distribution Licensee under Section 14 of the Act;
- (29) "**Design Energy**" in relation to a hydel power Generating Station means the quantum of energy, which could be generated in a 90 per cent dependable year with 95 per cent installed capacity of the Generating Station;
- (30) "**Distribution Business**" means the Business of operating and maintaining a distribution system for supplying electricity in the area of supply of a Distribution Licensee;
- (31) "**Distribution Licensee**" means a Licensee authorised to operate and maintain a distribution system for supplying electricity to consumers in its area of supply;
- (32) "**Distribution Wires Business**" means the Business of operating and maintaining a distribution system for wheeling of electricity in the area of supply of a Distribution Licensee;
- (33) "**Detailed Project Report Scheme**" (or "**DPR Scheme**") means a capital expenditure Scheme with projected capital cost exceeding the limits specified in these Regulations, for which the Generating Company or Licensee or MSLDC is required to obtain prior in-principle approval by submitting a Detailed Project Report (DPR) in accordance

with the Guidelines of the Commission for In-Principle Clearance of proposed Investment Schemes.

- (34) **“Extra High Tension”** (or **“EHT”**) means all voltages above 33 kiloVolt;
- (35) **“Expected Revenue from Tariff and Charges”** means the revenue estimated to accrue to the Generating Company or Transmission Licensee or Distribution Licensee from the Regulated Business at the prevailing level of Tariff and Charges;
- (36) **“Existing Generating Unit/Station”** means a Generating Unit or Station declared as under commercial operation prior to April 1, 2020;
- (37) **“Event”** means an unscheduled or unplanned occurrence in the intra-State transmission system, including faults, incidents and breakdowns;
- (38) **“Extended Life”** means the life of a generating Station or Unit thereof or of a transmission system or element thereof beyond the period of Useful Life, as may be approved by the Commission on a case to case basis;
- (39) **“Fees”** means the payments to be collected by the MSLDC for services rendered on account of registration, membership or any other account as determined by the Commission;
- (40) **“Force Majeure Event”** means, with respect to any party, any event or circumstance, or combination of events or circumstances, which is not within the reasonable control of, and is not due to an act of omission or commission of that party and which, by the exercise of reasonable care and diligence, could not have been prevented; and, without limiting the generality of the foregoing, shall include the following events or circumstances:
- a. acts of God, including but not limited to lightning, storm, action of the elements, earthquakes, flood, torrential rains, drought and natural disaster;
  - b. strikes and industrial disturbances having a State-wide or extensive impact in the area of supply of a Licensee, but excluding strikes and industrial disturbances in the Licensee's own organisation;
  - c. acts of war, invasion, armed conflict or act of foreign enemy, insurrections, riots, revolution, terrorist or military action;
  - d. unavoidable accident, including but not limited to fire, explosion, radioactive contamination and toxic chemical contamination;

- e. any shutdown or interruption of the grid, which is required or directed by the concerned Load Despatch Centre;
- (41) **“Generation Business”** means the Business of production of electricity from a Generating Station for the purpose of (i) giving supply to any premises or enabling supply to be so given, or (ii) for the purpose of supply of electricity to any Distribution Licensee in accordance with the Act and the rules and regulations made thereunder, or (iii) subject to the Regulations made under sub-section (2) of Section 42 of the Act, supply of electricity to any consumer;
- (42) **“Generating Company”** means any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person, which owns or operates or maintains a generating Station;
- (43) **“Generating Station”** (or **“Station”**) means a Station or a Unit thereof for generating electricity, including any building and plant with step-up transformer, switch-gear, switch yard, cables or other appurtenant equipment 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 include any sub-Station;
- (44) **“Gross Calorific Value”** (or **“GCV”**) in relation to a thermal Generating Station means the heat produced in kilocalories (kcal) by complete combustion of one kilogram (kg) of solid fuel or one litre of liquid fuel or one standard cubic metre of gaseous fuel, as the case may be;
- (45) **“Gross Station Heat Rate”** means the heat energy input in kcal required to generate one kilo Watt hour (kWh) of electrical energy at generator terminals;
- (46) **“High Tension”** (or **“HT”**) means all voltages above and including 650 Volt and up to and including 33 kiloVolt;
- (47) **“Indian Governmental Instrumentality”** means the Government of India, State Government and any Ministry or Department or Board or Agency controlled by Government of India or the Government of the State where the Project is located or regulatory or quasi-judicial authority constituted under the relevant statutes in India;

(48) "**Infirm power**" means electricity injected into the grid prior to the commercial operation of a Unit or Block of the Generating Station;

(49) "**Installed Capacity**" 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);

(50) "**Intra-State Transmission System**" (or "**InSTS**") means any system for conveyance of electricity by transmission lines within the area of the State of Maharashtra, and includes all transmission lines, sub-stations and associated equipment of Transmission Licensees in the State:

Provided that the definition of point of separation between a transmission system and distribution system and between a Generating Station and transmission system shall be guided by the Regulations notified by the Central Electricity Authority under clause (b) of Section 73 of the Act;

(51) "**Licensee**" for the purpose of these Regulations shall mean a Transmission Licensee or Distribution Licensee, as the case may be, duly authorised by the Commission;

(52) "**Low Tension**" (or "**LT**") means all voltages below 650 Volt;

(53) "**Market operation function**" means the functions of scheduling, despatch, data acquisition, energy accounting and deviation settlement, transmission loss calculation and apportionment, operation of pool account and congestion charge account, administering ancillary services, information dissemination and any other functions assigned to the MSLDC by the Act or Regulations or Orders;

(54) "**Maximum Continuous Rating**" (or "**MCR**") in relation to a Unit of a 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;

(55) "**New Generating Unit/Station**" means a Generating Unit or Station declared under commercial operation on or after April 1, 2020;

- (56) **“Ninety (90) % Dependable Year”** shall mean the year in which the annual energy generation has the probability of being equal to or in excess of 90% of the expected period of operation of the Plant;
- (57) **“Non-Coincident Peak demand”** means the peak demand as measured at G-T interface for a Distribution Licensee during a period, which may or may not occur at the time of system peak demand in the State as a whole;
- (58) **“Non-DPR Scheme”** means a capital expenditure Scheme with projected capital cost within the limits specified in these Regulations, for which the Generating Company or Licensee or MSLDC is not required to obtain prior in-principle approval of the Commission;
- (59) **“Non-Pithead generating station”** means a generating station, which is not covered under Pithead Generating Station;
- (60) **“Non-Tariff Income”** means the income relating to the regulated Business other than from Tariff, excluding any income from Other Business and, in case of the Retail Supply Business of a Distribution Licensee, excluding income from receipts on account of cross-subsidy surcharge and additional surcharge and Other Business;
- (61) **“Normative Annual Plant Availability Factor”** (or **“NAPAF”**), in relation to a hydel Generating Station, means the Availability Factor specified in Regulation 46 for hydel Generating Stations;
- (62) **“Officer”** means an officer of the Commission;
- (63) **“Operation and Maintenance expenses”** (or **“O&M expenses”**) in respect of a Generating Company means the expenditure incurred on operation and maintenance of the Generating Station or Unit of a Generating Company, or part thereof, and includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads, but excludes fuel expenses; and, in respect of a Licensee, means the expenditure incurred on operation and maintenance by a Transmission Licensee or Distribution Licensee, or part thereof, and includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads;

(64) **“Original Project Cost”** means the capital expenditure incurred by a Generating Company or Transmission Licensee within the original scope of the Project, up to the cut-off date as admitted by the Commission;

(65) **“Petitioner”** means a Generating Company or Transmission Licensee or Distribution Licensee or MSLDC, who has filed a Petition for determination of Tariff or Fees and Charges or for True up or for Mid-term Review in accordance with the Act and these Regulations, and includes a Generating Company or Transmission Licensee or Distribution Licensee or MSLDC whose Tariff or Fees and Charges is the subject of a review by the Commission on a suo-motu basis or as part of a Truing-up exercise or Mid-term Review;

(66) **“Pithead generating station”** means a generating station having captive transportation system for its exclusive use for transportation of coal from the loading point at the mining end up to the unloading point at the generating station without using the normal public transportation system;

(67) **“Plant Availability Factor”** (or **“PAF”**), in relation to a hydel Generating Station for any period, means the average of the daily declared capacities (DCs) for all the days as certified by the MSLDC during that period, expressed as a percentage of the installed capacity in MW, reduced by the normative auxiliary energy consumption;

(68) **“Plant Load Factor”** (or **“PLF”**), in relation to a thermal Generating Station or Unit for a given period, means the total sent-out energy corresponding to scheduled generation during such 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:

$$\text{Plant Load Factor (\%)} = 100 \times \frac{\sum_{i=1}^N SG_i}{\{ N \times IC \times (1 - AUX_n) \}} \%$$

where - N = number of time blocks in the given period

SG = Scheduled Generation in MW for the  $i^{\text{th}}$  time block in such period

IC = Installed Capacity of the Generating Station in MW

AUX<sub>n</sub> = Normative Auxiliary Consumption in MW, expressed as a percentage of gross generation;

- (69) "**Pool Account**" means the accounts for payments relating to Unscheduled Interchanges ('UI Account') applicable under the Inter-State Availability Based Tariff (ABT) mechanism or Intra-State ABT Settlement Charges as identified under the Intra-State ABT mechanism operating in the State, or Reactive Energy Exchanges (Reactive Energy Account) or Deviation Settlement Mechanism under the Maharashtra Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2019 or any other such Accounts, which may be operated by the MSLDC in accordance with the Regulations or directions of the Commission;
- (70) "**Project**" means a Generating Station or the transmission system, as the case may be and, in case of a hydel Generating Station, includes all components of the generating facility such as penstocks, head and tail works, main and regulating reservoirs dams and other hydraulic works, intake water conductor system, power Generating Station and generating Units, as apportioned to power generation;
- (71) "**Prudence Check**" means the scrutiny of reasonableness of 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 Aggregate Revenue Requirement and Tariff or Fees and Charges;
- (72) "**Pumped Storage Hydel Generating Station**" means a hydel Station which generates power through energy stored in the form of water energy, pumped from a lower elevation reservoir to a higher elevation reservoir;
- (73) "**Rated Voltage**" means the voltage at which the transmission system is designed to operate or such lower voltage at which the line is charged, for the time being, in consultation with Transmission System Users;
- (74) "**Revised Emission Standards**" in respect of thermal generating station means the revised norms notified as per Environment (Protection) Amendment Rules, 2015 or any other Rules as may be notified from time to time;
- (75) "**Retail Supply Business**" means the Business of sale of electricity by a Distribution Licensee to its consumers in accordance with the terms of its Licence;
- (76) "**Run-of-river Generating Station**" means a hydel Generating Station, which does not have upstream pondage;

(77) **“Run-of-river Generating Station with pondage”** means a hydel Generating Station with sufficient pondage for meeting the diurnal variation of power demand;

(78) **“Scheduled Energy”** means the quantum of energy scheduled by the concerned Load Despatch Centre to be injected into the grid by a generating station for a given time period;

(79) **“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 concerned Load Despatch Centre;

**Note:**

For open cycle gas turbine generating station or a combined cycle generating station if the average frequency for any time-block, is below 49.52 Hz but not below 49.02 Hz and the scheduled generation is more than 98.5% of the declared capacity, the scheduled generation shall be deemed to have been reduced to 98.5% of the declared capacity, and if the average frequency for any time-block is below 49.02 Hz and the scheduled generation is more than 96.5% of the declared capacity, the scheduled generation shall be deemed to have been reduced to 96.5% of the declared capacity. In such an event of reduction of scheduled generation of gas turbine generating station, the corresponding drawal schedule of beneficiaries shall be corrected in proportion to their scheduled drawal with adjustment of transmission losses on post facto basis.

(80) **“Small Gas Turbine Generating Station”** means and includes open cycle gas turbine or combined cycle Generating Stations with gas turbines in the capacity range of 50 MW or below;

(81) **“Storage-type Power Station”** means a hydel power Generating Station associated with large storage capacity to enable variation in generation of electricity according to demand;

(82) **“State Grid Code”** means the Code specified by the Commission under clause (h) of sub-section (1) of Section 86 of the Act;

(83) **“Thermal Generating Station”** means a generating Station or a Unit thereof that generates electricity using fossil fuels such as coal, lignite, gas, liquid fuel or combination of these as its primary source of energy;

(84) **“Transmission System”** means a line or a group of lines with or without associated sub-Station, and includes equipment associated with transmission lines and sub-stations;

(85) **“Transmission Capacity Rights”** means the right of a Transmission System User to transfer power in MW, under normal circumstances, between such points of injection and drawal as may be set out in the Bulk Power Transmission Agreement;

(86) **“Transmission Licensee”** means a Licensee authorised by the Commission to establish or operate transmission lines under Section 14 of the Act;

(87) **“Transmission System User”** for the purpose of these Regulations means the Distribution Licensees and long-term Open Access Users, but excludes partial Open Access Users;

(88) **“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; and, in relation to a hydel Generating Station, means turbine-generator and its auxiliaries;

(89) **“Useful Life”** in relation to a Unit of a Generating Station, transmission system, distribution system and communication system from the date of commercial operation shall mean the following, namely:-

- |       |                                                                                |           |
|-------|--------------------------------------------------------------------------------|-----------|
| i.    | Coal/Lignite based thermal generating Station:                                 | 25 years; |
| ii.   | Gas/Liquid fuel based thermal Generating Station:                              | 25 years; |
| iii.  | Hydro Generating Station including Pumped Storage<br>Hydro Generating Station: | 40 years; |
| iv.   | AC and DC sub-Station:                                                         | 35 years; |
| v.    | Gas Insulated sub-Station:                                                     | 35 years; |
| vi.   | Transmission line (including HVAC and HVDC):                                   | 35 years; |
| vii.  | Distribution line:                                                             | 35 years; |
| viii. | Communication System:                                                          | 15 years; |

Provided that the useful life for AC and DC sub-Stations and Gas Insulated sub-Station for which Notice Inviting Tender was floated before 01.04.2016 shall be considered as 25 years:

Provided further that the extension of life of the projects beyond the completion of their Useful Life shall be decided by the Commission;

(90) “**Year**” means a financial year (‘FY’);

(91) “**Z-factor Charge**” is the charge allowed to a Generation Company, Transmission Licensee and Distribution Licensee on account of uncontrollable factors, viz., fuel surcharge adjustment and cost pertaining to identified uncontrollable factors as specified in these Regulations;

2.2 Words or expressions used in these Regulations but not defined herein shall have the meanings assigned to them in the Act or Rules or Regulations framed thereunder.

### **3 Scope of Regulations**

3.1 The Commission shall determine the Aggregate Revenue Requirement, Tariff and Fees and Charges, including terms and conditions thereof, in accordance with these Regulations for all matters for which the Commission has jurisdiction under the Act, including the following:-

- (i) For supply of electricity by a Generating Company, except from Renewable Sources of energy, to a Distribution Licensee;
- (ii) For Intra-State transmission of electricity;
- (iii) For use of intervening transmission facilities;
- (iv) For Wheeling of electricity;
- (v) For Retail supply of electricity;
- (vi) For MSLDC, in terms of Fees and Charges;
- (vii) For Surcharge in addition to the charges for wheeling under the first proviso to sub-section (2) of Section 42 of the Act, in accordance with the Regulations of the Commission governing Distribution Open Access and Orders issued by the Commission;
- (viii) For Additional surcharge on the charges for wheeling under sub-section (4) of Section 42 of the Act, in accordance with the Regulations of the Commission governing Distribution Open Access and Orders of the Commission:

Provided that the Commission shall determine such Tariff and Fees and Charges, having regard to the terms and conditions contained in **Parts E, F, G, H and I** of these Regulations, as may be applicable.

- 3.2 Notwithstanding anything contained in these Regulations, the Commission shall adopt the Tariff if such Tariff has been determined through a transparent process of bidding in accordance with the guidelines issued by the Central Government under Section 63 of the Act:

Provided that the Petitioner shall provide such information as the Commission may require to satisfy itself that the guidelines issued by the Central Government have been duly followed.

## **PART- A: GENERAL PRINCIPLES**

### **4 Multi-Year Tariff Framework**

- 4.1 The Commission shall determine the Tariff and Fees and Charges for matters covered under clauses (i), (ii), (iii), (iv), (v), (vi), (vii), and (viii) of Regulation 3.1, under a Multi-Year Tariff framework with effect from April 1, 2020.

- 4.2 The Multi-Year Tariff framework shall be based on the following elements, for computation of Aggregate Revenue Requirement and expected revenue from Tariff and Charges for Generating Companies, Transmission Licensees, Distribution Wires Business, Retail Supply Business, and Fees and Charges of MSLDC:

- (i) A Multi-Year Tariff Petition comprising the forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff or Fees and Charges in case of MSLDC, expected revenue gap, and proposed Tariff or Fees and Charges for each year of the Control Period, shall be submitted by the Generating Company or Licensee or MSLDC:

Provided that the Distribution Licensee shall propose the category-wise Tariffs for each year of the Control Period:

Provided further that the performance parameters whose trajectories have been specified in these Regulations shall form the basis of projection for the Aggregate Revenue Requirement for the entire Control Period;

- (ii) Determination of the Aggregate Revenue Requirement and Tariff or Fees and Charges for Generating Companies, Transmission Licensees, Distribution Wires Business, Retail Supply Business, and MSLDC by the Commission for each year of the Control Period, at the start of the Control Period:

Provided that the Commission shall also approve the sharing proportion amongst the Transmission System Users of the MSLDC Fees and Charges for the Control Period;

- (iii) Petition for Mid-term Review of operational and financial performance vis-à-vis the approved forecast for the first three years of the Control Period; and revised forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff, expected revenue gap, and proposed category-wise Tariffs for the fourth and fifth year of the Control Period, shall be submitted by the Generating Company or Licensee or MSLDC;
- (iv) True-up for the first and second years of the Control Period based on audited accounts and provisional true-up for the third year of the Control Period of operational and financial performance vis-à-vis the approved forecast for the respective years shall be submitted by the Generating Company or Licensee or MSLDC along with its Petition for Mid-term Review;
- (v) Determination of the revised Aggregate Revenue Requirement and Tariff or Fees and Charges for Generating Companies, Transmission Licensees, Distribution Wires Business, Retail Supply Business, and MSLDC by the Commission for the fourth and fifth year of the Control Period based on the Mid-term Review;
- (vi) True-up for the first and second years of the Control Period, provisional true-up for the third year of the Control Period of operational and financial performance vis-à-vis the approved forecast for the respective years, and categorization of variation in performance as those caused by factors within the control of the Petitioner (controllable factors) and by factors beyond its control (uncontrollable factors) by the Commission, along with the Mid-term Review;
- (vii) The mechanism for pass-through of approved gains or losses on account of uncontrollable factors as specified by the Commission in these Regulations;
- (viii) The mechanism for sharing of approved gains or losses arising out of controllable factors as specified by the Commission in these Regulations.

## **5 Petitions to be filed in the Control Period**

5.1 The Petitions to be filed in the Control Period under these Regulations are as under:

- a) Multi-Year Tariff Petition, which is complete in all aspects as per these Regulations, shall be filed by November 1, 2019 by Generating Companies and Transmission Licensees and SLDC, and by November 30, 2019, by Distribution Licensees, comprising:
  - i. Truing-up for FY 2017-18 and FY 2018-19 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015:

- Provided that the Commission may, if it considers appropriate, carry out the Truing-up for years prior to FY 2017-18 under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015, along with the Truing-up for FY 2017-18, in case such Truing-up is yet to be completed;
- ii. Provisional Truing-up for FY 2019-20 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015;
  - iii. Aggregate Revenue Requirement for each year of the Control Period under these Regulations;
  - iv. Revenue from the sale of power at existing Tariffs and charges and projected revenue gap for each year of the Control Period under these Regulations;
  - v. Proposed category-wise Tariff or Fees & Charges for each year of the Control Period under these Regulations.
- b) Mid-Term Review Petition, which is complete in all aspects as per these Regulations, shall be filed by November 1, 2022 by Generating Companies, Transmission Licensees and SLDC, and by November 30, 2022, by Distribution Licensees, comprising:
- i. Truing-up for FY 2019-20 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015;
  - ii. Truing-up for FY 2020-21 and FY 2021-22 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2019;
  - iii. Provisional Truing-up for FY 2022-23 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2019;
  - iv. Revised forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff and charges, expected revenue gap, and proposed category-wise Tariff for the fourth and fifth year of the Control Period;
- c) True-up Petition, which is complete in all aspects as per these Regulations, for the third and fourth year of the Control Period shall be filed by November 1, 2024 by Generating Companies, Transmission Licensees and SLDC, and by November 30, 2024, by Distribution Licensees, comprising:
- i. Truing-up for FY 2022-23 and FY 2023-24 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2019;

- ii. Provisional Truing-up for FY 2024-25 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2019:

Provided that, in case of a Deemed Distribution Licensee whose tariff is yet to be determined by the Commission till March 31, 2020, the Commission may relax the timelines for submission of the Multi-Year Tariff Petition, Mid-term Review Petition and Truing-up Petitions, in case such specific relaxation is sought by such Distribution Licensee:

Provided further that such Deemed Distribution Licensee may be permitted to first file a Petition for approval of a ceiling or other provisional tariff in its area of supply, followed by a Petition for approval of Power Purchase Agreement or arrangement, after which the Multi-Year Tariff Petition may be filed:

Provided also that if the Petition is not filed within the specified timelines and/or data sought by the Commission for processing the Petition is not submitted within the stipulated time, then the carrying cost due to consequential delay in issue of the Order, shall not be allowed to the Generating Company or Transmission Licensee or Distribution Licensees or SLDC, as the case may be:

Provided also that a Petition may be filed at any time during the Control Period in case of variation in uncontrollable factors that may result in sudden, steep, and sustained increase in tariff.

- 5.2 The Petitioner shall submit separate audited Accounting Statements along with the Petition for determination of Tariff or Fees and Charges and Truing-up under these Regulations:

Provided that, in case complete accounting segregation has not been done between the Distribution Wires Business and Retail Supply Business of a Distribution Licensee, its Aggregate Revenue Requirement shall be apportioned between the Distribution Wires Business and Retail Supply Business in accordance with the Allocation Matrix specified in **Part G** of these Regulations.

- 5.3 Incumbent Distribution Licensees shall have the option of filing separate Petitions under these Regulations for an area in respect of which the Commission has issued multiple Distribution Licences:

Provided that each such separate Petition shall contain all necessary details of expenses, revenue, assets, liabilities, capitalisation, and category-wise tariff to enable the Commission to determine the Aggregate Revenue Requirement and Tariff for each separate area for which it has been filed:

Provided further that such expenses, revenue, assets, liabilities, and capitalisation considered for each such area shall be excluded while submitting the Petition for the remaining area of supply:

Provided also that the Distribution Licensee shall submit the reconciliation statement for expenses, revenue, assets, liabilities, and capitalisation between the entity as a whole and each such separate area of supply for which the Distribution Licensee has filed a separate Petition.

## **6 Multi-Year Tariff Petition**

- 6.1 The Multi-Year Tariff Petition shall include a forecast of Aggregate Revenue Requirement and expected revenue from Tariff for each year of the Control Period in the manner specified in these Regulations, and be accompanied by applicable fees.
- 6.2 The forecast of Aggregate Revenue Requirement may be based on assumptions relating to the behaviour of individual variables during the Control Period, including category-wise sales and demand projections, power procurement plan, capital investment plan, financing plan and physical targets, in accordance with guidelines and formats as may be prescribed by the Commission.
- 6.3 The capital investment plan shall show, separately, on-going projects that will spill over into the Control Period, and new projects (with justification) that will commence in the Control Period but may be completed within or beyond it, for which relevant technical and commercial details shall be provided.
- 6.4 The Distribution Licensee shall project the realistic power purchase requirement from all Generating Stations considered for power purchase based on the Merit Order Despatch principles, the Renewable Purchase Obligation (RPO) specified by the Commission under the relevant Regulations, and the target set, if any, for Energy Efficiency (EE) and Demand Side Management (DSM) schemes:

Provided that Merit Order Despatch principles shall not apply to purchase of power from Renewable Energy sources up to the RPO specified by the Commission.

- 6.5 The forecast of expected revenue from Tariff and charges shall be based on the following:
  - (a) In the case of a Generating Company, estimates of quantum of electricity to be generated by each Unit/Station for each year of the Control Period;
  - (b) In the case of a Transmission Licensee, estimate of Aggregate Revenue Requirement or estimates of transmission capacity allocated to Transmission System Users, as appropriate, for each year of the Control Period;

- (c) In the case of a Distribution Licensee, estimates of quantum of electricity to be supplied to consumers and wheeled on behalf of Distribution System Users for each year of the Control Period:

Provided that the Distribution Licensee shall submit relevant details of category-wise sales separately for each Distribution Franchisee area, including the Input Energy and the Input Rate;

- (d) Prevailing Tariff as on the date of filing of the Petition.

6.6 Based on the forecast of Aggregate Revenue Requirement and expected revenue from Tariff and charges, the Generating Company or Distribution Licensee or MSLDC shall submit the proposed Tariff or Fees and Charges, category-wise if applicable, for each year of the Control Period, that would meet the gap, if any, in the Aggregate Revenue Requirement, including unrecovered revenue gaps of previous years to the extent proposed to be recovered.

6.7 Full details supporting the forecast shall be provided, including but not limited to details of past performance, proposed initiatives for achieving efficiency or productivity gains, technical studies, contractual arrangements and secondary research, to enable the Commission to assess the reasonableness of the forecast.

6.8 On receipt of the Petition, the Commission shall either-

- (a) issue an Order approving the Aggregate Revenue Requirement and Tariff for the Control Period, subject to such modifications and conditions as it may stipulate; or reject the Petition for reasons to be recorded in writing, after giving the Petitioner a reasonable opportunity of being heard.

## **7 Specific trajectory for certain variables**

The Commission, while approving the Multi-Year Tariff Petition, may stipulate a trajectory for certain variables, including but not limited to transmission losses, distribution losses, collection efficiency, and payment efficiency.

## **8 Mid-term Review**

8.1 A Petition for Mid-term Review and Truing-up of the Aggregate Revenue Requirement and Revenue for the Years 2020-21 and 2021-22, and provisional Truing-up for the Year 2022-23, shall be filed by November 1, 2022 by Generating Companies, Transmission Licensees and SLDC, and by November 30, 2022, by Distribution Licensees:

Provided that the Petition shall include information in such form as may be stipulated by the Commission, together with the Accounting Statements, extracts of books of account and such other details, including Cost Accounting Reports or extracts thereof, as it may require to assess the reasons for and extent of any difference in operational and financial performance from the approved forecast of Aggregate Revenue Requirement and expected revenue from Tariff and charges:

Provided further that if the Petition is not filed within the specified timelines and/or data sought by the Commission for processing the Petition is not submitted within the stipulated time, then the carrying cost due to consequential delay in issue of the Order, shall not be allowed to the Generating Company or Transmission Licensee or Distribution Licensees or SLDC, as the case may be.

- 8.2 The scope of the Mid-term Review shall be a comparison of the actual operational and financial performance vis-à-vis the approved forecast for the first three years of the Control Period; and revised forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff, expected revenue gap, and proposed category-wise Tariffs for the fourth and fifth year of the Control Period:

Provided that as part of the Mid-term Review, the Commission may inter-alia modify the category-wise sales, power purchase expenses, O&M expenses, capital expenditure related expenses, principles/basis of tariff categorisation, applicability of charges, Generation Tariff, Transmission Tariff, Wheeling Charges, and category-wise Tariff, as considered appropriate based on the data made available for the first three years of the Control Period:

Provided further that necessary justification for the modifications made in the Mid-term Review shall be elaborated in the Mid-term Review Order.

- 8.3 Upon completion of the Review under Regulation 8.2, the Commission shall attribute any variations or expected variations in performance, for variables specified under Regulation 9, to factors within the control of the Petitioner (controllable factors) or to factors beyond its control (uncontrollable factors):

Provided that any variations or expected variations in performance, for variables other than those specified under Regulation 9.1, shall not ordinarily be reviewed by the Commission during the Control Period and shall be attributed entirely to controllable factors:

Provided further that, where the Petitioner believes, for any variable not specified under Regulation 9.1, that there is a material variation or expected variation in performance for any year on account of uncontrollable factors, it may apply to the Commission for inclusion of such variable.

- 8.4 Upon completion of the Mid-term Review, the Commission shall pass an order recording-
- (a) the approved aggregate gain or loss to the Generating Company or Licensee or MSLDC on account of controllable factors for the Years 2020-21 and 2021-22, and provisional Truing-up for the Year 2022-23, and the amount of such gains or such losses that may be shared in accordance with Regulation 11;
  - (b) the approved aggregate gain or loss to the Generating Company or Licensee or MSLDC on account of uncontrollable factors for the Years 2020-21 and 2021-22, and provisional Truing-up for the Year 2022-23, and the amount of such gains or such losses that were not recovered during the respective years and which may be shared in accordance with Regulation 10;
  - (c) the approved modifications to the Aggregate Revenue Requirement and Tariffs or Fees and Charges for the remainder of the Control Period.

## **9 Controllable and uncontrollable factors**

- 9.1 The “uncontrollable factors” shall comprise the following factors, which were beyond the control of, and could not be mitigated by the Petitioner, as determined by the Commission:
- (a) Force Majeure events;
  - (b) Change in law;
  - (c) Variation in fuel cost on account of variation in price of primary and/or secondary fuel prices;
  - (d) Variation in sales;
  - (e) Variation in the cost of power purchase due to variation in the rate of power purchase, subject to clauses in the power purchase agreement or arrangement approved by the Commission;
  - (f) Variation in inter-State Transmission Charges;
  - (g) Variation in market interest rates for long-term loan; and
  - (h) Variation in freight rates.
- 9.2 Variations or expected variations in the performance of the Petitioner, which may be attributed by the Commission to controllable factors include, but are not limited to the following:
- (a) Variation in technical and commercial losses;

- (b) Variation in operational norms;
- (c) Variation in amount of interest on working capital;
- (d) Variation in Operation & Maintenance expenses;
- (e) Variation in Coal transit losses.

## **10 Mechanism for pass-through of gains or losses on account of uncontrollable factors**

10.1 The aggregate gain or loss to a Generating Company on account of variation in cost of fuel from the sources considered in the Tariff Order, including blending ratio of coal procured from different sources, shall be passed through as an adjustment in its Energy Charges on a monthly basis, as specified in Regulation 50.6.

10.2 The aggregate gain or loss to a Distribution Licensee on account of variation in cost of fuel, power purchase, and inter-State Transmission Charges, covered under Regulation 9.1, shall be passed through under the Fuel Adjustment Charge (FAC) component of the Z-factor Charge ( $Z_{FAC}$ ), as an adjustment in its Tariff on a monthly basis, as specified in these Regulations and as may be determined in orders of the Commission passed under these Regulations, and shall be subject to ex-post facto approval by the Commission on a quarterly basis:

Provided that the  $Z_{FAC}$  for the first month of the first year of the Control Period shall require the prior approval of the Commission, based on prudence check;

Provided further that the Distribution Licensee shall submit, in the stipulated formats, details of the variation between expenses incurred and those approved by the Commission, and the detailed computations and supporting documents as may be required for verification by the Commission for the first month of the first year of the Control Period, for prior approval of  $Z_{FAC}$ ;

Provided also that the Distribution Licensee shall submit the details of variation in fuel costs relating to power generated from own generation Stations and cost of power procured, and inter-State Transmission Charges for the first month of the first year of the Control Period, after completion of the first month.

10.3 The  $Z_{FAC}$  component shall be applicable to the entire sales of a Distribution Licensee without any exemption to any consumer.

10.4 The  $Z_{FAC}$  component shall be computed and charged on the basis of actual variation in cost of fuel and power purchase, and inter-State Transmission Charges relating to power procured during any month subsequent to such costs being incurred, in accordance with

these Regulations, and shall not be computed on the basis of estimated or expected variations in fuel and/or power purchase costs.

- 10.5 After approval by the Commission of the  $Z_{FAC}$  for the first month of the first year of the Control Period, the Distribution Licensee shall submit such details, in the stipulated formats, of the variation between expenses incurred and the figures approved, and the detailed computations and supporting documents as may be required for verification by the Commission for the subsequent months of the Control Period for post-facto approval of  $Z_{FAC}$ :

Provided that the first quarter of the first year of the Control Period shall include the first month of the first year of the Control Period, for which prior approval of  $Z_{FAC}$  is required;

Provided further that the Distribution Licensee shall submit the details of variation in fuel costs relating to power generated from its own generation stations, cost of power procured, and inter-State Transmission Charges for the subsequent months of the Control Period on a quarterly basis within 60 days of the close of each quarter, for post facto approval;

Provided also that the Distribution Licensee shall submit the  $Z_{FAC}$  levied to all consumers for the preceding quarter vis-a-vis the  $Z_{FAC}$  recoverable, along with the detailed computations and supporting documents as may be required, for verification by the Commission:

Provided also that the Distribution Licensee shall provide details of the Commission's approval of levy of  $Z_{FAC}$  on its internet website.

- 10.6 The formula for computation of the FAC component of Z-factor Charge is as follows:

$$Z_{FAC} \text{ (Rs crore)} = F + C + B,$$

Where,

$Z_{FAC}$  = Z-factor Charge component for FAC;

F = Change in fuel cost of own generation, cost of power purchase, and inter-State Transmission Charges as covered under Regulation 9.1;

C = Carrying Cost for any under recovery/over recovery, computed at the Base Rate prevailing at the beginning of the month, plus 150 basis points;

B = Adjustment factor for over-recovery/under-recovery.

- 10.7 The calculation for FAC to be charged for the month "n" is as follows:

$$Z_{FAC \ n} \text{ (Rs crore)} = F_{n-2} + C_{n-2} + B_{n-2},$$

Where,

$F_{n-2}$  = Change in fuel cost of own generation, cost of power purchase, and inter-State Transmission Charges, for the month "n-2", and shall be computed as

$$F \text{ (Rs. Crore)} = A_{FC,Gen} + A_{FC,PP} + A_{TC},$$

Where,

$A_{FC,Gen}$  = Change in fuel cost of own generation, to be computed based on the directives and norms approved by the Commission, including heat rate, auxiliary consumption, etc.;

$A_{FC,PP}$  = Change in variable and/or fixed cost of power procured from other sources, which would be allowed to the extent it satisfies the criteria prescribed in these Regulations and the prevailing Tariff Order, and subject to applicable norms;

$A_{TC}$  = Change in inter-State Transmission Charges;

$C_{n-2}$  = Carrying cost for any under recovery/over recovery for the month "n-2";

$$B_{n-2} \text{ (Rs. Crore)} = Z_{FAC \ n-4} - R_{n-2}$$

Where:

$B_{n-2}$  = Adjustment factor for over-recovery / under-recovery for the month "n-2";

$Z_{FACn-4}$  =  $Z_{FAC}$  for the month "n-4";

$R_{n-2}$  =  $Z_{FAC}$  for the month "n-4" actually recovered in the month "n-2";

10.8 The total  $Z_{FAC}$  recoverable as per the formula specified above shall be recovered from the actual sales in terms of "Rupees per kilowatt-hour":

Provided that, in case of unmetered consumers, the  $Z_{FAC}$  shall be recoverable based on estimated sales to such consumers, computed in accordance with such methodology as may be stipulated by the Commission:

Provided further that, where the actual annual sliding distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of  $Z_{FAC}$  corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total  $Z_{FAC}$  recoverable.

10.9 The  $Z_{FAC}$  per kWh for a particular Tariff category/sub-category/consumption slab shall be computed as per the following formula:

$$Z_{FAC \ Cat} \text{ (Rs/kWh)} = [Z_{FAC} / (\text{Metered sales} + \text{Unmetered consumption estimates} + \text{Excess distribution losses})] * k * 10,$$

Where:

$Z_{FAC\ Cat} = Z_{FAC}$  component for a particular Tariff category/sub-category/consumption slab in 'Rupees per kWh' terms;

$k = \text{Average Billing Rate} / \text{ACOS}$ ;

Average Billing Rate = Average Billing Rate for a particular Tariff category/sub-category/consumption slab under consideration in 'Rupees per kWh' as approved by the Commission in the Tariff Order:

Provided that the Average Billing Rate for the unmetered consumers shall be based on the estimated sales to such consumers, computed in accordance with such methodology as may be stipulated by the Commission:

ACOS = Average Cost of Supply in 'Rupees per kWh' as approved for recovery by the Commission in the Tariff Order:

Provided that the monthly ZFAC shall not exceed 20% of the variable component of Tariff or such other ceiling as may be stipulated by the Commission from time to time:

Provided further that any under-recovery in the  $Z_{FAC}$  on account of such ceiling shall be carried forward and shall be recovered by the Distribution Licensee over such future period as may be directed by the Commission.

- 10.10 The consequential impact of decisions of higher Courts or Tribunals or Review Orders passed by the Commission on the Generating Company or Licensee shall be passed through under the 'Other Uncontrollable Cost' component of the Z-factor Charge ( $Z_{OUC}$ ) as an adjustment in the Tariff on a yearly basis for the second, third and fifth Years of the Control Period, as may be determined in the Order of the Commission passed under these Regulations.
- 10.11 The impact of change in the intra-State transmission charges payable by the Distribution Licensee for the second, third and fifth Years of the Control Period shall be passed through under the  $Z_{OUC}$  as an adjustment in the Tariff of the Distribution Licensee on a yearly basis, as may be determined in the Order of the Commission passed under these Regulations.
- 10.12 The  $Z_{OUC}$  shall be determined based on a Petition filed by the concerned Generating Company or Licensee.
- 10.13 The consequential impact of decisions of higher Courts or Tribunals or Review Orders passed by the Commission on the Generating Company or Licensee, and the impact of change in the intra-State transmission charges payable by the Distribution Licensee, for the first and fourth Years of the Control Period shall be addressed in the Multi-Year Tariff Order and Mid-term Review Order, respectively.

## **11 Mechanism for sharing of gains or losses on account of controllable factors**

- 11.1 The approved aggregate gain to the Generating Company or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner:
- (a) Two-third of the amount of such gain shall be passed on as a rebate in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;
  - (b) The balance amount of such gain shall be retained by the Generating Company or Licensee or MSLDC.
- 11.2 The approved aggregate loss to the Generating Company or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner:
- (a) One-third of the amount of such loss may be passed on as an additional charge in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;
  - (b) The balance amount of such loss shall be absorbed by the Generating Company or Licensee or MSLDC.

## **PART- B: PROCEDURE FOR DETERMINATION OF TARIFF**

### **12 Filing of Petition for determination of Tariff**

- 12.1 A Petition for determination of Tariff shall be filed in such form and in such manner as specified in these Regulations, and be accompanied by applicable fees.
- 12.2 The proceedings for determination of Tariff shall be undertaken by the Commission in accordance with the Regulations governing its Conduct of Business.
- 12.3 Notwithstanding anything contained in these Regulations, the Commission shall have the authority, either *suo motu* or on a Petition filed by the Generating Company or Licensee or MSLDC, to determine its Tariff or Fees and Charges, including terms and conditions thereof.

### **13 Determination of Generation Tariff**

#### **13.1 Existing Generating Station**

- 13.1.1 Where the Commission has, at any time prior to April 1, 2020, approved a power purchase agreement or arrangement between a Generating Company and a Distribution Licensee or has adopted the Tariff contained therein for supply of electricity from an existing generating Unit/Station, then the Tariff for supply of electricity by such

Generating Company to the Distribution Licensee shall be in accordance with the Tariff mentioned in such power purchase agreement or arrangement for such period as so approved or adopted by the Commission.

- 13.1.2 Where, as on April 1, 2020, the power purchase agreement or arrangement between a Generating Company and a Distribution Licensee for supply of electricity from an existing generating Unit/Station or the Tariff therein has not been approved by the Commission, or where there is no power purchase agreement or arrangement, the supply of electricity by such Generating Company to the Distribution Licensee after April 1, 2020 shall be in accordance with a power purchase agreement approved by the Commission in accordance with **Part C** of these Regulations:

Provided that the Petition for approval of such power purchase agreement or arrangement shall be filed by the Distribution Licensee with the Commission within three months from the date of notification of these Regulations:

Provided further that the supply of electricity shall be allowed to continue under the present agreement or arrangement until such time as the Commission approves such power purchase agreement, and shall be discontinued forthwith if the Commission rejects it, for reasons to be recorded in writing.

### 13.2 New Generating Stations

The Tariff for the supply of electricity by a Generating Company to a Distribution Licensee from a new generating Unit/Station shall be in accordance with the Tariff determined in accordance with **Part E** of these Regulations.

### 13.3 Own Generating Stations

- 13.3.1 Where a Distribution Licensee also undertakes the Business of generation of electricity, the transfer price at which electricity is supplied by its Generation Business to its Retail Supply Business shall be determined by the Commission:

Provided that the Commission shall have regard to the terms and conditions specified in **Part E** of these Regulations in determining the transfer price for such supply.

- 13.3.2 The Distribution Licensee shall maintain a separate record for its Generation Business and an Allocation Statement so as to enable the Commission to identify the direct and indirect costs relating to such Business and return on equity capital accruing to it.

- 13.4 The Distribution Licensee shall submit, along with the separate Petition for determination of Tariff for retail supply of electricity, the information required under **Part E** of these Regulations relating to the Generation Business.

## **14 Determination of Tariff and Fees and Charges for Transmission, Distribution Wires Business, Retail Supply Business, and MSLDC**

- 14.1 The Commission shall determine the Aggregate Revenue Requirement and Tariff for Transmission Licensees, Distribution Wires Business, Retail Supply Business, and Fees and Charges for MSLDC, upon consideration of a Petition filed by the Licensee or MSLDC, as the case may be, in accordance with the procedure contained in this Regulation.
- 14.2 The Commission shall determine the Tariff for the Licensee or Fees and Charges for the MSLDC for -
- (a) Transmission of electricity, in accordance with the terms and conditions contained in **Part F** of these Regulations;
  - (b) Distribution Wires Business, in accordance with the terms and conditions contained in **Part G** of these Regulations;
  - (c) Retail Supply Business, in accordance with the terms and conditions contained in **Part H** of these Regulations; and
  - (d) MSLDC, in accordance with the terms and conditions contained in **Part I** of these Regulations.
- 14.3 The Petitioner shall provide, as part of its Petition and in such form as may be stipulated by the Commission, details of computation of the Aggregate Revenue Requirement and expected revenue from Tariff and charges, and thereafter shall furnish such further information or particulars or documents as the Commission or its Secretary or any Officer designated for the purpose by the Commission may reasonably require to assess such calculation:
- Provided that the Petition shall be accompanied, where relevant, by a detailed Tariff revision proposal showing category-wise Tariffs and how such revision would meet the gap, if any, in Aggregate Revenue Requirement for each year of the Control Period:
- Provided further that the Commission may stipulate different formats for details to be submitted by the Petitioner as it may reasonably require for assessing the Aggregate Revenue Requirement and for determining the Tariff:
- Provided also that the Commission may conduct a Technical Validation Session prior to admission of the Petition.
- 14.4 The Petitioner shall submit a duly completed draft Public Notice for the Commission's approval as per the stipulated template, for publication as and when intimated by the Commission.

14.5 Upon receipt of a complete Petition accompanied by the requisite information, particulars and documents in compliance with the requirements specified in this Regulation, the Petition shall be admitted, and the Commission or its Secretary or designated Officer shall intimate to the Petitioner that it is ready for publication.

14.6 The Petitioner shall, within three days of an intimation given to it in accordance with Regulation 14.4, publish a Public Notice in at least two English and two Marathi language daily newspapers widely circulated in the area to which the Petition pertains, outlining the proposed Tariff, and such other matters as may be stipulated by the Commission, and inviting suggestions and objections from the public:

Provided that the Petitioner shall make available a hard copy of the complete Petition to any person, at such locations and at such rates as may be stipulated by the Commission:

Provided further that the Petitioner shall also provide on its internet website, in text-searchable format or in downloadable spreadsheet format and showing detailed computations, the Petition filed before the Commission along with all regulatory filings, information, particulars and documents in the manner stipulated by the Commission:

Provided also that the web link to the information mentioned in the second proviso to this Regulation shall be easily accessible, archived for downloading and be prominently displayed on the Petitioner's internet website:

Provided also that the Petitioner may be exempted by the Commission from providing any such information, particulars or documents as are confidential in nature.

*Explanation* – For the purpose of this Regulation, the term “downloadable spreadsheet format” shall mean one (or multiple, linked) spreadsheet software files containing all assumptions, formulae, calculations, software macros and outputs forming the basis of the Petition.

14.7 The Petitioner shall furnish to the Commission all such books and records (or certified true copies thereof), including the Accounting Statements, operational and cost data, as may be required by it for determination of Tariff.

14.8 The Commission may, if it considers necessary, make or cause to be made available to any person such information as has been provided by the Petitioner to it, including abstracts of books and records (or certified true copies thereof) on such terms and conditions as may be specified in Regulations of the Commission governing its Conduct of Business.

14.9 The Commission may direct the Generating Company or Licensee to submit such performance-related data as it may stipulate, with the Petitions to be filed under these Regulations.

14.10 The procedural aspects pertaining to the Petition contained in this Regulation shall apply only to such an extent as may be required by the Commission having regard to the circumstances of an individual case, to -

- (a) a Petition filed by a Transmission Licensee under Section 36 of the Act;
- (b) a Petition filed by a Generating Company or Licensee under Section 64 of the Act;
- (c) a Petition filed by the MSLDC under Section 32 of the Act.

## **15 Tariff Order**

15.1 The Commission shall, within one hundred and twenty days from receipt of a complete Petition, and after considering all suggestions and objections received from the public:

- (a) issue a Tariff Order accepting the Petition with such modifications or conditions as may be stipulated in that Order;
- (b) reject the Petition for reasons to be recorded in writing if such Petition is not in accordance with the provisions of the Act and the rules and Regulations made thereunder or any other provisions of law, after giving the Petitioner a reasonable opportunity of being heard.

15.2 The Petitioner shall publish the Tariff approved by the Commission in at least two English and two Marathi language daily newspapers having wide circulation in its Licence area, provide the approved Tariff schedule on its internet website, and make available for sale a booklet containing such Tariff to any person upon payment of reasonable reproduction charges:

Provided that, where the Petitioner is a Generating Company, such publication shall be made in newspapers widely circulated in the area of supply of the Distribution Licensee to whom the electricity is proposed to be supplied in terms of the Tariff Order, and shall also be provided on the internet website of that Distribution Licensee.

15.3 The Tariff so published shall be in force from the date stipulated in the Order and shall, unless amended or revised, continue to be in force for such period as may be stipulated therein.

## **16 Adherence to Tariff Order**

16.1 No Tariff or part of any Tariff may ordinarily be amended more frequently than once in a year, except in respect of any changes expressly permitted under Z-factor Charge as specified in Regulation 10.

16.2 If any Generating Company or Licensee recovers a price or charge exceeding the Tariff determined under Section 62 of the Act and in accordance with these Regulations, the excess amount shall be payable to the person who has paid such price or charge, along with interest equivalent to the Bank Rate declared by the Reserve Bank of India prevailing during the relevant period, without prejudice to any other liability to which such Generating Company or Licensee may be subjected to:

Provided that such interest payable to any party shall not be allowed to be recovered through the Aggregate Revenue Requirement of the Generating Company or Licensee:

Provided also that the Generating Company or Licensee shall maintain separate details of such interest paid or payable by it, and shall submit them to the Commission along with its Petition.

16.3 The Generating Company or Licensee shall submit periodic returns as may be required by the Commission, containing operational and cost data to enable it to monitor the implementation of its Order.

## **17 Deviation from ceiling tariff**

17.1 The tariff determined in these Regulations shall be a ceiling tariff, and the Generating Company and its Beneficiaries may mutually agree to charge a lower tariff.

17.2 The Generating Company may opt to charge a lower tariff for a period not exceeding the validity of these Regulations on agreeing to deviation from operational parameters, reduction in Operation and Maintenance expenses, reduced Return on Equity and incentive specified in these Regulations.

17.3 The deviation from the ceiling tariff determined by the Commission, shall come into effect from the date agreed to by the Generating Company and the Beneficiaries.

17.4 The Generating Company and the Beneficiaries of a Generating Station shall be required to intimate the Commission for charging lower tariff in accordance with Regulation 17.1 to 17.3 above. The details of the accounts and the tariff actually charged under Regulation 17.1 to 17.3 shall be submitted at the time of true up.

17.5 The revenue loss on account of charging lower than approved tariff shall be borne entirely for all times by the Generating Company and the impact of such revenue loss shall not be passed on to the Beneficiaries, in any form.

## **PART C: POWER PROCUREMENT**

### **18 Applicability**

The Regulations contained in this Part shall apply to power procurement by a Distribution Licensee from a Generating Company or Trading Licensee or Distribution Licensee or from any other source through agreement or arrangement for purchase of power for distribution and supply within the State.

### **19 Power procurement guidelines**

19.1 The Distribution Licensee shall undertake its power procurement during the year in accordance with the power procurement plan for the Control Period, which may include long-term, medium-term and short-term power procurement, approved by the Commission in accordance with these Regulations.

19.2 A Distribution Licensee shall follow the guidelines contained in this Part with respect to:

- (a) Procurement of power under any arrangement or agreement with a term or duration exceeding seven years but not exceeding twenty-five years (i.e., long-term power procurement);
- (b) Procurement of power under any arrangement or agreement with a term or duration exceeding one year but not exceeding seven years (i.e., medium-term power procurement); and
- (c) Procurement of power under any arrangement or agreement with a term or duration less than or equal to one year (i.e., short-term power procurement).

19.3 All future procurement of short-term or medium-term or long-term power, including Renewable Energy, shall invariably be undertaken through competitive bidding in accordance with Guidelines notified by the Government of India under Section 63 of the Act:

Provided that in case either no competitive bids are received or the bids received are higher than the prevailing market rates or on any other sufficient reason, then the Distribution Licensee may procure medium-term or long-term power under Section 62 of the Act, subject to fulfilling the conditions specified in Regulation 21.

### **20 Power Procurement Plan**

20.1 The Distribution Licensee shall prepare a plan for procurement of power to serve the

demand for electricity in its area of supply and submit such plan to the Commission for approval:

Provided that such power procurement plan shall be submitted for the Control Period commencing on April 1, 2020, along with the Petition for determination of Tariff for the Control Period from April 1, 2020 to March 31, 2025, in accordance with **Part A** of these Regulations;

Provided further that such power procurement plan may include long-term, medium-term and short-term sources of power procurement, in accordance with these Regulations.

20.2 The power procurement plan of the Distribution Licensee shall comprise the following:

- (a) A quantitative forecast of the unrestricted base load and peak load for electricity within its area of supply;
- (b) An estimate of the quantities of electricity supply from the identified sources of power purchase, including own generation if any;
- (c) An estimate of availability of power to meet the base load and peak load requirement:

Provided that such estimate of demand and supply shall be on month-wise basis in Mega-Watt (MW) as well as expressed in Million Units (MU);

- (d) Standards to be maintained with regard to quality and reliability of supply, in accordance with the relevant Regulations of the Commission;
- (e) Measures proposed for energy conservation, energy efficiency, and Demand Side Management;
- (f) The requirement for new sources of power procurement, including augmentation of own generation capacity, if any, and identified new sources of supply, based on (a) to (e) above;
- (g) The sources of power, quantities and cost estimates for such procurement:

Provided that the forecast or estimates contained in the long-term procurement plan shall be separately stated for peak and off-peak periods, in terms of quantities of power to be procured (in MU) and maximum demand (in MW):

Provided further that the forecast or estimates for the Control Period from FY 2020-21 to FY 2024-25 shall be prepared for each month over the Control Period:

Provided also that the long-term/medium-term procurement plan shall be a least cost plan based on available information regarding costs of various sources of supply.

*Explanation* – For the purpose of this Regulation, the term “peak period” shall mean such block of three or more continuous hours during a twenty-four hour period representing maximum power demand for the Distribution Licensee.

- 20.3 The forecast or estimate shall be prepared using forecasting techniques based on past data and reasonable assumptions regarding the future:

Provided that the forecast or estimate shall take into account factors such as overall economic growth, consumption growth of electricity-intensive sectors, advent of competition in the electricity sector, trends in captive power, impact of loss reduction initiatives, improvement in Generating Station Plant Load Factors and other relevant factors.

- 20.4 Where the Commission has specified a percentage of the total consumption of electricity in the area of a Distribution Licensee to be purchased from co-generation or renewable sources of energy, the power procurement plan shall include the plan for procurement from such sources up to the specified level.

- 20.5 The Distribution Licensee shall forward a copy of its power procurement plan to the State Transmission Utility for verification of its consistency with the transmission system plan for the intra-State Transmission System, prepared in accordance with the Regulations of the Commission governing Transmission Open Access:

Provided that the Distribution Licensee shall also consult the State Transmission Utility at the time of preparation of the power procurement plan, to ensure consistency of such plan with the transmission system plan.

- 20.6 The Commission shall approve the power procurement plan for the Control Period as part of its Order on the MYT Petition.

- 20.7 The Distribution Licensee may, as a result of additional information not previously known or available to it at the time of submission of the procurement plan under Regulation 20.1, apply for modification in the power procurement plan for the remainder of the Control Period, as part of its Petition for Mid-term Performance Review under Regulation 8.

- 20.8 The Commission may, as a result of additional information not previously known or available to the Commission at the time of approval of the procurement plan under Regulation 20.6, if it deems appropriate, *suo motu* or on a Petition filed by the Distribution Licensee, modify the procurement plan of the Distribution Licensee for the remainder of the Control Period, as part of the Mid-term Review.

## **21 Approval of long-term/medium-term power purchase agreement/arrangement**

21.1 Every long-term/medium-term agreement or arrangement for power procurement, including on a Standby basis, by a Distribution Licensee from a Generating Company or Licensee or from another source of supply, and any change to an existing agreement or arrangement shall come into effect only with the prior approval of the Commission:

Provided that the prior approval of the Commission shall not be required for purchase of power from Renewable Energy sources at the generic/preferential tariff determined by the Commission for meeting its Renewable Purchase Obligation (RPO).

21.2 The Petition for approval of Power Purchase Agreement or arrangement shall include the power procurement plan for its duration:

Provided that public consultation shall not be required for adoption of tariff discovered through competitive bidding under Section 63 of the Act:

Provided further that in case of power procurement under Section 62 of the Act, public consultation as stipulated under Regulation 21.3 to 21.5 shall be followed.

21.3 The Petitioner shall submit a duly completed draft Public Notice for the Commission's approval as per the stipulated template, for publication as and when intimated by the Commission.

21.4 Upon receipt of a complete Petition accompanied by the requisite information, particulars and documents in compliance with the requirements specified in this Regulation, the Petition shall be admitted and the Commission or its Secretary or designated Officer shall intimate to the Petitioner that the Petition is ready for publication.

21.5 The Petitioner shall, within three days of an intimation given to it in accordance with Regulation 21.4, publish a Public Notice, in at least two English and two Marathi language daily newspapers widely circulated in the area to which the Petition pertains, outlining the salient features of the proposed agreement or arrangement for power procurement and the impact on the power procurement cost and Tariff, and such other matters as may be stipulated by the Commission, and inviting suggestions and objections from the public:

Provided that the Petitioner shall make available a hard copy of the complete Petition to any person at such locations and at such rates as may be stipulated by the Commission;

Provided further that the Petitioner shall also provide the Petition filed before the Commission along with all regulatory filings, information, particulars and documents in the manner stipulated by the Commission on its internet website:

Provided also that the web-link to the information mentioned in the second proviso to this Regulation shall be easily accessible, archived for downloading and shall be prominently displayed on the Petitioner's internet website:

Provided also that the Petitioner may be exempted by the Commission from providing any such information, particulars or documents as are confidential in nature.

21.6 The Commission shall consider a Petition for approval of power procurement agreement or arrangement having regard to the approved power procurement plan of the Distribution Licensee and the following factors:

- (a) Requirement of power procurement under the approved power procurement plan;
- (b) Adherence to a transparent process of bidding in accordance with guidelines issued by the Central Government under Section 63 of the Act or Adherence to the terms and conditions for determination of Tariff specified under **Part E** of these Regulations;
- (c) Competitiveness of the Tariff vis-a-vis the Tariff prevalent in the market and/or Tariff discovered through competitive bidding under Section 63 of the Act;
- (d) Availability (or expected availability) of capacity in the intra-State transmission system for evacuation and supply of power procured under the agreement or arrangement;
- (e) Need to promote co-generation and generation of electricity from renewable sources of energy.

21.7 Upon completion of its consideration of the power procurement agreement or arrangement, the Commission shall:

- (a) issue an Order approving the power procurement agreement or arrangement, subject to such modifications and conditions as it may stipulate; or
- (b) reject the Petition for reasons to be recorded in writing, after giving the Petitioner an opportunity to be heard.

## **22 Additional power procurement**

22.1 The Distribution Licensee may undertake additional power procurement during the year, over and above the power procurement plan for the Control Period approved by the Commission, in accordance with this Regulation.

22.2 Where there has been an unanticipated increase in the demand for electricity or a shortfall or failure in the supply of electricity from any approved source of supply during the Year or when the sourcing of power from existing tied-up sources becomes costlier

than other available alternative sources, the Distribution Licensee may enter into additional agreement or arrangement for procurement of power.

- 22.3 Any variation, during the first or second block of six months of a Year, in the quantum or cost of power procured, including from a source other than a previously approved source, that is expected to be in excess of five per cent of that approved by the Commission, shall require its prior approval:

Provided that the five per cent limit shall not apply to variation in the cost of power procured on account of changes in the price of fuel for own generation or the fixed or variable cost of power purchase that is allowed to be recovered in accordance with Regulation 10.

- 22.4 Where the Distribution Licensee has identified a new short-term source of supply from which power can be procured at a Tariff that reduces its approved total power procurement cost, it may enter into a short-term power procurement agreement or arrangement with such supplier without the prior approval of the Commission.

- 22.5 The Distribution Licensee may enter into a short-term arrangement or agreement for procurement of power without the prior approval of the Commission when faced with emergency conditions that threaten the stability of the distribution system, or when directed to do so by the MSLDC to prevent grid failure.

- 22.6 Within fifteen days from the date of entering into an agreement or arrangement for short-term power procurement for which prior approval is not required, the Distribution Licensee shall submit to the Commission its details, including the quantum, Tariff computations, duration, supplier particulars, method of supplier selection and such other details as the Commission may require so to assess that the conditions specified in this Regulation have been complied with.

- 22.7 Where the Commission has reasonable grounds to believe that the agreement or arrangement entered into by the Distribution Licensee does not meet the criteria specified in Regulations 22.2 to 22.5, it may disallow any increase in the total cost of power procurement over the approved level arising therefrom or any loss incurred by the Distribution Licensee as a result, from being passed through to consumers.

## **PART D: FINANCIAL PRINCIPLES**

### **23 Financial Prudence**

- 23.1 The Generating Company or Licensee or MSLDC shall manage its finances in an optimum and prudent manner.

23.2 In determining the Aggregate Revenue Requirement and Tariff of the Generating Company or Licensee or MSLDC, the Commission shall assess the financial prudence exercised with regard to the following factors:

- (a) revenue;
- (b) revenue expenditure;
- (c) capital expenditure:

Provided that the Commission may disallow a part of the Aggregate Revenue Requirement, as an efficiency measure, if it finds the exercise of such prudence to have been deficient.

23.3 The financial prudence with respect to revenue shall be assessed in terms of the following parameters:

- (a) whether category-wise sales projections are based on realistic estimates, and adequate justification has been provided for any anomalous increase in sales projected by the Distribution Licensee;
- (b) whether projected generation is based on realistic estimates, and adequate justification has been provided for any anomalous increase in generation projected by the Generating Company;
- (c) billing efficiency measured as a percentage of the units billed by the Generating Company or Licensee to the total units injected into the transmission or distribution system, as the case may be;
- (d) collection efficiency measured as a percentage of the amount collected by the Generating Company or Licensee to the total amount billed;
- (e) reduction in arrears receivable from Beneficiaries/consumers;
- (f) percentage of metered consumers and metered consumption out of the total, in the case of Distribution Licensee;
- (g) percentage of bills raised on the basis of assessed consumption out of the total number of bills raised by the Distribution Licensee;
- (h) whether revenue collected is in line with the projections made in the Petition and approved by the Commission.

23.4 The financial prudence with respect to revenue expenditure shall be assessed in terms of the following parameters:

- (a) monitoring of the revenue expenditure as against the revenue earned, such that the expenses and payment obligations of the Generating Company or Licensee to other entities are met in a timely manner;
- (b) mechanism put in place for monitoring adherence to the approved revenue expenditure, including schedule of interest payments for long-term loans and working capital;
- (c) transparent method of power procurement, with the objective of optimising the power purchase expenses, as specified in Regulations 19, 20, 21, and 22;
- (d) optimum purchase of power considering factors such as requirement of power, Merit Order Despatch, potential for earning additional net revenue based on the differential between the rate for purchase of power from different sources and the market rate for sale of surplus power, if any:

Provided that, in case the excess of revenue expenditure over the revenue earned exceeds 5%, the Generating Company or Licensee shall submit detailed justification for the mismatch along with its Petition for True-up, including a comparison of the revenue expenditure and revenue estimated in the Petition with the amounts approved by the Commission and with the actual amount of revenue expenditure and revenue, under key heads;

Provided further that the Generating Company or Licensee shall submit a detailed cash flow statement for the respective Business showing the various sources of revenue, the actual amount of cash collected against the amount billed to different consumer categories for sale of electricity, the comparison of the actual revenue expenditure and capital expenditure with the projected and approved revenue expenditure and capital expenditure:

Provided also that, in case its payment obligations to other entities are not regularly met, the Generating Company or Licensee shall provide justification for such shortfall with reference to its cash flow statement:

Provided also that the Generating Company or Licensee shall submit the Cost Audit Report along with the true-up Petition to justify the revenue expenses incurred as well as inventory management policies.

23.5 The financial prudence with respect to capital expenditure shall be assessed in terms of the following parameters:

- (a) whether projected capital expenditure and capitalisation is based on realistic estimates, and adequate justification has been provided for any anomalous

increase in capital expenditure and capitalisation projected by the Generating Company or Licensee;

- (b) mechanism put in place for monitoring the physical progress of projects with respect to their original schedule;
- (c) optimum drawal of loans in accordance with the physical progress of the capital expenditure schemes, and efficient utilisation of such loans;
- (d) in case the actual capital expenditure or capitalisation exceeds 10% of that approved by the Commission, the Generating Company or Licensee shall submit detailed justification for such excess along with its Petition for True-up;
- (e) in case any scheme has not been commenced during the year despite the Commission's approval, detailed justification shall be submitted along with the Petition for True-up.

## **24 Capital Cost and Capital Structure**

24.1 Capital cost for a capital investment Project shall include:

- (a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, as admitted by the Commission after prudence check;
- (b) capitalised initial spares subject to the ceiling rates specified in this Regulation;
- (c) expenses incurred by the Licensee on obtaining right of way, as admitted by the Commission after prudence check;
- (d) additional capitalisation determined under Regulation 25;
- (e) any gain or loss on account of foreign exchange rate variation pertaining to the loan amount availed up to the cut-off date, as admitted by the Commission after prudence check:

Provided that any gain or loss on account of foreign exchange rate variation pertaining to the loan amount availed up to the date of commercial operation shall be adjusted only against the debt component of the capital cost:

Provided further that the capital cost of the assets forming part of the Project but not put to use or not in use, shall be excluded from the capital cost of Generation Project and transmission system:

Provided also that the Generating Company or Transmission Licensee or Distribution Licensee shall submit documentary evidence in support of its claim of assets being put to use:

Provided also that the Commission may undertake a sample check to verify the assets put to use as submitted by the Generating Company or Licensee or SLDC, as the case may be, independent of the tariff determination process:

Provided also that any capital expenditure incurred based on the specific requirement of a Generating Company or Licensee shall be substantiated with necessary documentary evidence of such request and undertaking received:

Provided also that the following shall be excluded from the capital cost of the existing and new projects:

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;
- (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

Provided that in case replacement of transmission asset is recommended by State Transmission Utility, such asset shall be decapitalised only after its redeployment;

Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.

- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
- (e) Any consumer contribution or grant received from the Central or State Government or any statutory body or authority for the execution of the project, which does not carry any liability of repayment.

24.2 The capital cost admitted by the Commission after prudence check shall form the basis for determination of Tariff:

Provided that prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan including the choice and manner of funding, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of Tariff:

Provided further that the entire gain to the Generating Company or Licensee or MSLDC on account of variations in capitalisation, in terms of variation in Interest and Finance Charges, Return on Equity, and Depreciation, shall be passed on as a rebate in Tariff over such period as may be stipulated in the Order of the Commission after prudence check:

Provided also that the loss to the Generating Company or Licensee or MSLDC on account of variations in capitalisation, in terms of variation in Interest and Finance Charges, Return on Equity, and Depreciation, shall be shared between the Generating Company or Licensee or MSLDC and the respective Beneficiary or consumer in the manner stipulated by the Commission in its Order after prudence check.

- 24.3 The approved capital cost shall be considered for determination of Tariff, and any escalation in the capital cost for which sufficient justification is provided may be considered by the Commission subject to prudence check and in accordance with the conditions and methodology specified in Regulation 39:

Provided that, in case the actual capital cost is lower than the approved capital cost, the actual capital cost, subject to prudence check and in accordance with the conditions and methodology specified in Regulation 39 for the capital cost of new generating Unit/Station, shall be considered for determination of Tariff of the Generating Company.

- 24.4 The capital cost of the concerned asset/s shall be considered after deducting the amount of accumulated depreciation computed till the period of asset utilisation for unregulated business or for the period the assets remain unutilised, for the purpose of tariff determination, in the following instances:

- a) The asset/s have been used for a period of time for unregulated business or the asset/s have become part of the asset base of the regulated business after lapse of time with respect to the COD of the asset;
- b) If the asset has not been put to use for the regulated business after COD.

- 24.5 The actual capital expenditure on a scheme as on COD for the original scope of work based on audited accounts of the Generating Company or Licensee or MSLDC or Project, as the case may be, shall be considered subject to prudence check by the Commission.

- 24.6 The Commission may approve, for each year of the Control Period, an additional amount equivalent to 20% of the total capital expenditure approved for that year, towards planned or unplanned capital expenditure that is yet to be approved by the Commission.

- 24.7 The cumulative amount of capitalisation against non-DPR schemes for any Year shall not exceed 20% or such other limit as may be stipulated by the Commission through an

Order, of the cumulative amount of capitalisation approved against DPR schemes for that Year:

Provided that the Commission may allow capitalisation against non-DPR schemes for any Year in excess of 20% or such other limit as may have been stipulated by the Commission through Order, on a request made by the Generating Company or Licensee or MSLDC:

Provided further that the Generating Company or Licensee or MSLDC should ensure that expenses that would normally be classified as O&M expenses are not categorised under non-DPR schemes.

24.8 Where the power purchase agreement or bulk power transmission agreement provides for a ceiling on capital cost, the capital cost to be considered shall not exceed such ceiling.

24.9 The revenue earned from sale of infirm power prior to the COD in excess of fuel cost as specified under Regulation 44, shall be adjusted against the Capital Cost.

24.10 The capital cost may include initial spares capitalised as a percentage of the Plant and Machinery cost up to the cut-off date, subject to the following ceiling norms:

- |                                                                                       |       |
|---------------------------------------------------------------------------------------|-------|
| (a) Coal based/lignite fired Generating Stations:                                     | 4.0%; |
| (b) Gas turbine/combined cycle Generating Stations:                                   | 4.0%; |
| (c) Hydel Generating Stations, including pumped storage<br>hydel generating Stations: | 4.0%; |
| (d) Transmission System and Distribution System                                       |       |
| (i) Transmission Line & Distribution Line:                                            | 1.0%; |
| (ii) Transmission sub-Station & Distribution sub-Station<br>(green-field):            | 4.0%; |
| (iii) Transmission sub-Station (brown-field):                                         | 6.0%; |
| (iv) Series compensation devices and HVDC sub-Station:                                | 4.0%; |
| (v) Gas Insulated sub-Station (GIS):                                                  | 5.0%; |
| (vi) Communication System:                                                            | 3.5%; |
| (vii) Static Synchronous Compensator:                                                 | 6.0%. |

24.11 The impact of revaluation of assets shall be permitted provided it does not result in increase in Tariff of the Generating Company or Licensee:

Provided that any benefit from such revaluation shall be passed on to persons sharing the capacity charge in case of a Generating Company, to long-term intra-State open access customers of the Transmission Licensee or Distribution Licensee or retail supply consumers of Distribution Licensees, at the time of MYT Tariff determination or Mid-term Review or final Truing-up for the Control Period, as the case may be.

24.12 Any expenditure on replacement, renovation and modernisation or extension of life of old fixed assets, as applicable to Generating Companies or Licensees, shall be considered after writing off the net value of such replaced assets from the original capital cost, and shall be computed as follows:

Net Value of Replaced Assets = OCRA – AD;

Where;

OCRA: Original Capital Cost of Replaced Assets;

AD: Accumulated depreciation pertaining to the Replaced Assets:

Provided that, in case the original capital cost of the replaced asset is not available for any reason, it shall be considered by the Commission on a case to case basis:

Provided further that the amount of insurance proceeds received, if any, towards damage to any asset requiring its replacement shall be first adjusted towards outstanding actual or normative loan; and the balance amount, if any, shall be utilised to reduce the capital cost of such replaced asset, and any further balance amount shall be considered as Non-Tariff Income.

*Explanation* – For the purpose of this Regulation, the term 'renovation and modernisation' shall have the same meaning as in Section 80 IA of the Income-Tax Act, 1961.

## **25 Additional Capitalisation**

25.1 The capital expenditure, actually incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date, may be admitted by the Commission subject to prudence check:

- (i) Undischarged liabilities recognized to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 24;
- (iv) Liabilities to meet award of arbitration or for compliance of directions or order of any statutory authority or order or decree of any court of law; and

- (v) Change in law or compliance of any existing law; and
- (vi) Force majeure events:

Provided that the details of works included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the Petition for determination of final Tariff after the date of commercial operation of the Generating Unit/Station or transmission system.

25.2 The capital expenditure incurred or projected to be incurred in respect of a new Project on the following counts within the original scope of work after the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of directions or order of any statutory authority or order or decree of any court of law;
- (ii) Change in law or compliance of any existing law;
- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (iv) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments, etc.;
- (v) Any additional capital expenditure which has become necessary for efficient operation:

Provided that the claim shall be substantiated with the technical justification duly supported by documentary evidence like test results carried out by an independent agency 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:

Provided further that the approval of additional capital expenditure for efficient operation shall be subject to submission of report on impact assessment done by any reputed third-party technical expert/agency on the benefits realised from previous investments under this head in the last five years;

- (vi) Force majeure events;
- (vii) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
- (viii) Raising of ash dyke as a part of ash disposal system:

Provided that in case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, subject to prudence check on the following grounds:

- a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of

these Regulations;

- b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
- c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
- d) The replacement of such asset or equipment has otherwise been allowed by the Commission.

25.3 The capital expenditure, in respect of existing generating Station or the transmission system including communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or directions of any statutory authority or order or decree of any court of law;
- (ii) Change in law or compliance of any existing law;
- (iii) Force majeure events;
- (iv) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;
- (v) Deferred works relating to ash pond or ash handling system in addition to the original scope of work, on case to case basis;
- (vi) Usage of water from sewage treatment plant in thermal generating station:

Provided that any expenditure, which has been claimed under Renovation and Modernisation or repairs and maintenance under O&M expenses, shall not be claimed under this Regulation.

25.4 The additional capital expenditure required to be undertaken by the existing generating station for compliance of the Revised Emissions Standards, may be admitted by the Commission, subject to prudence check based on the following details to be submitted by the Generating Company:

- (i) details of proposed technology as specified by the Central Electricity Authority or alternative technology based on appropriate justification;
- (ii) scope of work;
- (iii) phasing of expenditure;
- (iv) schedule of completion;
- (v) estimated completion cost including foreign exchange component, if any;
- (vi) detailed computation of indicative impact on tariff to the beneficiaries; and
- (vii) any other information considered to be relevant by the Generating Company:

Provided that the Commission may grant approval after due consideration of the

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.

- 25.5 Impact of additional capitalisation on Tariff, if any, shall be considered during the subsequent tariff determination process.

## **26 Consumer Contribution, Deposit Work, Grant and Capital Subsidy**

26.1 The expenses on the following categories of works carried out by the Generating Company or Licensee or MSLDC shall be treated as specified in Regulation 26.2:

- (a) Works undertaken from funds, partly or fully, provided by the users, which are in the nature of deposit works or consumer contribution works;
- (b) Capital works undertaken with grants or capital subsidy received from the State and Central Governments;
- (c) Other works undertaken with funding received without any obligation of repayment and with no interest costs.

26.2 The expenses on such capital works shall be treated as follows:-

- (a) normative O&M expenses as specified in these Regulations shall be allowed;
- (b) the debt:equity ratio, shall be considered in accordance with Regulation 27, after deducting the amount of such financial support received;
- (c) provisions related to depreciation, as specified in Regulation 28, shall not be applicable to the extent of such financial support received;
- (d) provisions related to return on equity, as specified in Regulation 29 shall not be applicable to the extent of such financial support received;
- (e) provisions related to interest on loan capital, as specified in Regulation 30 shall not be applicable to the extent of such financial support received.

## **27 Debt-equity ratio**

27.1 For a capital investment Scheme declared under commercial operation on or after April 1, 2020, debt-equity ratio as on the date of commercial operation shall be 70:30 of the amount of capital cost approved by the Commission under Regulation 24, after prudence check for determination of Tariff:

Provided that the equity investment to be considered in any year shall not exceed the difference between the sum of cumulative return on equity allowed by the Commission

in previous years, efficiency gains and losses, incentives and disincentives, and income earned from investment of return on equity, and the cumulative equity investment approved by the Commission in previous years, unless the Generating Company or Licensee or MSLDC submits documentary evidence for the actual deployment of equity and explain the source of funds for the equity:

Provided further that the Generating Company or Licensee or MSLDC shall substantiate such investment of return on equity and income thereon through documentary evidence:

Provided also that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan for the Generating Company or Licensee or MSLDC for determination of Tariff:

Provided also that where equity actually deployed is less than 30% of the capital cost of the capitalised asset, the actual equity shall be considered for determination of Tariff:

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

Explanation.- The premium, if any, raised by the Generating Company or the Licensee while issuing share capital and investment of internal resources created out of its free reserves, for the funding of the Scheme, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the Generating Station or the transmission system or the distribution system, and are within the ceiling of 30% of capital cost approved by the Commission.

- 27.2 In case of the Generating Company or Licensee, if any fixed asset is capitalised on account of capital expenditure Scheme prior to April 1, 2020, the debt-equity ratio allowed by the Commission for determination of Tariff for the period ending March 31, 2020 shall be considered:

Provided that in case of retirement or replacement or de-capitalisation of the assets, the balance equity capital invested in the regulated Business approved in accordance with Regulation 27.1, shall be deducted from the regulatory equity of the Business:

Provided further that in case of retirement or replacement or de-capitalisation of the assets, the debt capital approved as mentioned above, shall be reduced to the extent of outstanding debt component based on documentary evidence, or the outstanding normative loan component, as the case may be, of the original cost of such assets.

- 27.3 Any expenditure incurred or projected to be incurred on or after April 1, 2020, as may be admitted by the Commission as additional capital expenditure for determination of

Tariff, and renovation and modernisation expenditure for life extension, shall be serviced in the manner specified in this Regulation.

## **28 Depreciation**

28.1 The Generating Company, Licensee, and MSLDC shall be permitted to recover depreciation on the value of fixed assets used in their respective Businesses, computed in the following manner:

- (a) The approved original cost of the fixed assets shall be the value base for calculation of depreciation:

Provided that the depreciation shall be allowed on the entire capitalised amount of the new assets after reducing the approved original cost of the retired or replaced or de-capitalised assets.

- (b) Depreciation shall be computed annually based on the straight line method at the rates specified in the **Annexure I** to these Regulations:

Provided that the Generating Company or Licensee or MSLDC shall ensure that once the individual asset is depreciated to the extent of seventy percent, remaining depreciable value as on 31<sup>st</sup> March of the year closing shall be spread over the balance Useful Life of the asset including the Extended Life, as provided in this Regulation:

Provided further that the Generating Company or Licensee or SLDC shall submit all such details or documentary evidence as may be required, to substantiate the above claims.

- (c) The salvage value of the asset shall be considered at 10 per cent of the allowable capital cost and depreciation shall be allowed upto a maximum of ninety per cent of the allowable capital cost of the asset:

Provided that the Generating Company or Licensee or SLDC shall submit certification from the Statutory Auditor for the capping of depreciation at ninety per cent of the allowable capital cost of the asset:

Provided further that the salvage value of Information Technology equipment and computer software shall be considered at 0 per cent of the allowable capital cost.

28.2 Land other than the land held under lease and the land for reservoir in case of hydel Generating Station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the assets.

- 28.3 In case of existing assets, the balance depreciable value as on April 1, 2020, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2020, from the gross depreciable value of the assets:
- Provided that depreciation shall be chargeable from the first year of commercial operation.
- 28.4 In case of projected commercial operation of the assets for part of the year, depreciation shall be computed based on the average of opening and closing value of assets.
- 28.5 Depreciation shall be re-computed for assets capitalised at the time of Truing-up along with the Mid-term Review or at the end of the Control Period, based on documentary evidence of assets capitalised by the Petitioner, subject to the prudence check of the Commission, such that the depreciation is allowed proportionately from the date of capitalisation.
- 28.6 The Generating Company or Licensee or SLDC shall submit the depreciation computations separately for assets added upto March 31, 2020 and assets added on or after April 1, 2020.

## **29 Return on Equity**

- 29.1 Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of up to 15.5 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of up to 17.5 per cent per annum in Indian Rupee terms:
- Provided that Return on Equity shall be allowed in two parts viz. Base Return on Equity, and Additional Return on Equity linked to actual performance:
- Provided further that Additional Return on Equity shall be allowed at time of truing up for respective year based on actual performance, after prudence check of the Commission:
- 29.2 Base Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of 14 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of 15.5 per cent per annum in Indian Rupee terms:

Provided that in case the Generation Company or Licensee or MSLDC claims Return on Equity at a rate lower than the normative rate specified above for any particular year, then such claim for lower Return on Equity shall be unconditional:

Provided further that such claim for lower Return on Equity shall be allowed subject to the condition that the reduction in Return on Equity shall be foregone permanently for that year and shall not be allowed to be recouped at the time of Mid-Term Review or true-up as applicable.

29.3 The Base Return on Equity shall be computed in the following manner:

- (a) Return at the allowable rate as per this Regulation, applied on the amount of equity capital at the commencement of the Year; plus
- (b) Return at the allowable rate as per this Regulation, applied on 50 per cent of the equity capital portion of the allowable capital cost, for the investments put to use in Generation Business or Transmission Business or Distribution Business or MSLDC, for such Year:

Provided that Base Return on Equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law or revised emission standards, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system.

29.4 In case of a new project, the rate of Return on Equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the SLDC.

29.5 In case of existing generating station, as and when any of the requirements under Regulation 29.4 are found lacking based on the report submitted by the SLDC, rate of Return on Equity shall be reduced by 1.00% at the time of true-up, for the period for which the deficiency continues.

29.6 In case of a thermal generating Unit, with effect from 1.4.2020, at the time of true-up:

- a) an additional rate of Return on Equity of 0.25% shall be allowed for every incremental ramp rate of 0.10% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of Return on Equity of 0.50%, for the year in which such ramp rate is achieved:

Provided that the additional rate of Return on Equity shall be allowed on pro-rata basis for incremental ramp rate of more than 0.10% per minute.

- b) an additional rate of Return on Equity shall be allowed as per the following schedule:
  - i. 0.50% for Unit that achieves Mean Time Between Failure (MTBF) of at least 45 days;
  - ii. 0.75% for Unit that achieves Mean Time Between Failure (MTBF) of at least 90 days;
  - iii. 1.00% for Unit that achieves Mean Time Between Failure (MTBF) of at least 120 days:

Provided that the Mean Time Between Failure (MTBF) shall be computed as provided in **Annexure-III** to these Regulations:

Provided further that the equity base for the respective Unit shall be considered in proportion to the installed capacity of the generation station, in case the tariff is determined for the generation station as a whole.

29.7 In case of Transmission, an additional rate of Return on Equity shall be allowed on Transmission Availability, at time of true-up as per the following schedule:

- a) For every 0.50% over-achievement in Transmission Availability up to Transmission Availability of 99.50% for AC System and 96.50% for HVDC bi-pole links and HVDC back-to-back stations, rate of return shall be increased by 0.75%;
- b) For every 0.25% over-achievement in Transmission Availability above 99.50% for AC System and 96.50% for HVDC bi-pole links and HVDC back-to-back stations, rate of return shall be increased by 0.75%, subject to ceiling of additional rate of Return on Equity of 1.50%;

Provided that the additional rate of Return on Equity shall be allowed on pro-rata basis for incremental Availability higher than Target Availability:

Provided further that Target Availability for additional rate of Return on Equity shall be as per Regulation 60.

29.8 In case of Distribution Wires Business, an additional rate of Return on Equity shall be allowed on Wires Availability at the time of true-up as per the following schedule:

- a) The target Wires Availability for recovery of base rate of return on equity shall be 95 percent for MSEDCL and 98% for other Distribution Licensees;
- b) For every 0.50% over-achievement in Wires Availability, rate of return shall be increased by 0.50%, subject to ceiling of additional rate of Return on Equity of 1.50%;

- c) Wires Availability shall be computed in accordance with the following formula:

$$\text{Wires Availability} = (1 - (\text{SAIDI} / 8760)) \times 100:$$

Provided that the System Average Interruption Duration Index (SAIDI) shall be calculated in accordance with the definition specified in Maharashtra Electricity Regulatory Commission (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2014, as amended from time to time.

29.9 In case of Retail Supply Business, an additional rate of Return on Equity shall be allowed at the time of true-up, as per the following schedule:

- a) If the percentage of assessed bills is less than 1.5% of the total number of bills issued during the year, then rate of return shall be increased by 1%;
- b) If the percentage of assessed bills is more than 1.5% of the total number of bills issued during the year, for every 0.5% reduction in the percentage of assessed billing, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 1.00%.
- c) If overall collection efficiency for the year is above 99 %, then rate of return shall be increased by 1%;
- d) If overall collection efficiency for the year is below 99 %, for every 0.5% improvement in the overall collection efficiency, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 1.00%.

### **30 Interest on loan**

30.1 The loans arrived at in the manner indicated in Regulation 27 on the assets put to use shall be considered as gross normative loan for calculation of interest on loan:

Provided that in case of retirement or replacement or de-capitalisation of assets, the loan capital approved as mentioned above, shall be reduced to the extent of outstanding loan component of the original cost of such assets based on documentary evidence.

30.2 The normative loan outstanding as on April 1, 2020, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2020, from the gross normative loan.

30.3 The loan repayment during each year of the Control Period from FY 2020-21 to FY 2024-25 shall be deemed to be equal to the depreciation allowed for that year.

- 30.4 Notwithstanding any moratorium period availed, the repayment of loan shall be considered from the first year of commercial operation of the Scheme and shall be equal to the annual depreciation allowed.
- 30.5 The rate of interest shall be the weighted average rate of interest computed on the basis of the actual long-term loan portfolio at the beginning of each year:
- Provided that at the time of Truing-up, the weighted average rate of interest computed on the basis of the actual long-term loan portfolio during the concerned year shall be considered as the rate of interest:
- Provided further that if there is no actual long-term loan for a particular year but normative long-term loan is still outstanding, the last available weighted average rate of interest for actual long-term loan shall be considered:
- Provided also that if the Generating Company or the Licensee or the MSLDC, as the case may be, does not have actual long-term loan even in the past, the weighted average rate of interest of its other Businesses regulated by the Commission shall be considered:
- Provided also that if the Generating Company or the Licensee or the MSLDC, as the case may be, does not have actual long-term loan, and its other Businesses regulated by the Commission also do not have actual long-term loan even in the past, then the weighted average rate of interest of the entity as a whole shall be considered:
- Provided also that if the entity as a whole does not have actual long-term loan, then the Base Rate at the beginning of the respective year shall be considered as the rate of interest for the purpose of allowing the interest on the normative loan.
- 30.6 The interest on loan shall be computed on the normative average loan of the year by applying the weighted average rate of interest:
- Provided that at the time of Truing-up, the normative average loan of the concerned year shall be considered on the basis of the actual asset capitalisation approved by the Commission for the year.
- 30.7 The above interest computation shall exclude interest on loan amount, normative or otherwise, to the extent of capital cost funded by Consumer Contribution, Deposit Works, Grants or Capital Subsidy.
- 30.8 The finance charges incurred for obtaining loans from financial institutions for any Year shall be allowed by the Commission at the time of Truing-up, subject to prudence check.
- 30.9 The excess interest during construction on account of time and/or cost overrun as compared to the approved completion schedule and capital cost or on account of excess drawal of the debt funds disproportionate to the actual requirement based on Scheme completion status, shall be allowed or disallowed partly or fully on a case to case basis,

after prudence check by the Commission based on the justification to be submitted by the Generating Company or Transmission Licensee or Distribution Licensee along with documentary evidence, as applicable:

Provided that where the excess interest during construction is on account of delay attributable to an agency or contractor or supplier engaged by the Generating Entity or the Transmission Licensee, any liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost:

Provided further that the extent of liquidated damages to be considered shall depend on the amount of excess interest during construction that has been allowed by the Commission:

Provided also that the Commission may also take into consideration the impact of time overrun on the supply of electricity to the concerned Beneficiary/ies.

- 30.10 The Generating Company or the Licensee or the MSLDC, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event, the costs associated with such re-financing shall be borne by the Beneficiaries and the net savings shall be shared between the Beneficiaries and them in the ratio of 2:1, subject to prudence check by the Commission:

Provided that refinancing shall not be done if it results in net increase on interest:

Provided further that if refinancing is done and it results in net increase on interest, then the rate of interest shall be considered equal to the Base Rate as on the date on which the Petition for determination of Tariff is filed:

Provided also that the re-financing shall not be subject to any adverse terms and conditions and additional cost:

Provided also that the Generating Company or the Licensee or the MSLDC, as the case may be, shall submit documentary evidence of the costs associated with such re-financing:

Provided also that the net savings in interest shall be computed after factoring all the terms and conditions, and based on the weighted average rate of interest of actual portfolio of loans taken from Banks and Financial Institutions recognised by the Reserve Bank of India for Indian institutions, before and after re-financing of loans:

Provided also that the net savings in interest shall be calculated as an annuity for the term of the loan, and the annual net savings shall be shared between the entity and Beneficiaries in the specified ratio.

30.11 Interest shall be allowed only on the amount held in cash as security deposit from Transmission System Users, Distribution System Users and Retail consumers at the Bank Rate as on 1<sup>st</sup> April of the Year for which the interest is payable:

Provided that at the time of Truing-up, the interest on the amount of security deposit for the year shall be considered on the basis of the actual interest paid by the Licensee during the year, subject to prudence check by the Commission.

### **31 Foreign Exchange Rate Variation**

31.1 The Generating Company or Licensee may hedge foreign exchange exposure in respect of the interest on foreign currency loan and repayment of foreign loan acquired for the generating Station or the transmission system or distribution system, in part or in full at its discretion.

31.2 The Generating Company or Licensee shall be permitted to recover the cost of hedging of foreign exchange rate variation corresponding to the foreign debt, in the relevant year as expense, subject to prudence check by the Commission, and extra rupee liability corresponding to such variation shall not be allowed against the hedged foreign debt.

31.3 To the extent that the foreign exchange exposure is not hedged, any extra rupee liability towards interest payment and loan repayment corresponding to the foreign currency loan in the relevant year shall be allowed subject to prudence check by the Commission, provided it is not attributable to such Generating Company or the Licensee or its suppliers or contractors.

### **32 Interest on Working Capital**

32.1 Generation

(a) In case of coal based/lignite-fired Generating Stations, working capital shall cover:

- (i) Cost of coal or lignite and limestone towards stock, if applicable, for fifteen days for pit-head Generating Stations and thirty days for non-pit-head Generating Stations, for generation corresponding to target availability, or the maximum coal/lignite stock storage capacity, whichever is lower;
- (ii) Cost of coal or lignite and limestone for thirty days for generation corresponding to target availability;
- (iii) Cost of secondary fuel oil for two months corresponding to target availability;
- (iv) Normative Operation and Maintenance expenses for one month;

- (v) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and
- (vi) Receivables for sale of electricity equivalent to forty-five days of the sum of annual fixed charges and energy charges approved in the Tariff Order for ensuing year/s, computed at target availability and excluding incentive, if any:  
**minus**
- (vii) Payables for fuel (including oil and secondary fuel oil) to the extent of thirty days of the cost of fuel computed at target availability, depending on the modalities of payment:

Provided that in case the Fuel Supply Agreement provides for payment of cost of fuel in advance, the payables for fuel shall not be deducted for the purpose of computing the working capital requirement to the extent of actual payment of such advance, as substantiated by documentary evidence:

Provided further that for the purpose of Truing-up, the working capital shall be computed based on the scheduled generation or target availability of the generating Station, whichever is lower:

Provided also that for the purpose of Truing up, the working capital shall be computed based on the actual average stock of coal or lignite and limestone or normative stock of coal or lignite and limestone of the generating Station, whichever is lower:

Provided also that for the purpose of Truing-up for any year, the working capital requirement shall be re-computed on the basis of the values of revised normative Operation & Maintenance expenses and actual Revenue from sale of electricity excluding incentive, if any, and other components of working capital approved by the Commission in the Truing-up before sharing of gains and losses;

- (b) In case of oil-fired Generating Stations, working capital shall cover:
  - (i) Cost of oil for thirty days towards stock, if applicable, for generation corresponding to target availability, or the maximum oil stock storage capacity, whichever is lower;
  - (ii) Cost of oil for thirty days for generation corresponding to target availability;
  - (iii) Normative Operation and Maintenance expenses for one month;
  - (iv) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and

- (v) Receivables for sale of electricity equivalent to forty-five days of the sum of annual fixed charges and energy charges approved in the Tariff Order for ensuing year/s, computed on target availability and excluding incentive, if any:

**minus**

- (vi) Payables for fuel to the extent of thirty days of the cost of fuel computed at target availability, depending on the modalities of payment:

Provided that for the purpose of Truing-up, the working capital shall be computed based on the scheduled generation or target availability of the generating Station, whichever is lower:

Provided further that for the purpose of Truing-up for any year, the working capital requirement shall be re-computed on the basis of the values of revised normative Operation & Maintenance expenses and actual Revenue from sale of electricity excluding incentive, if any, and other components of working capital approved by the Commission in the Truing-up before sharing of gains and losses;

- (c) In case of Open Cycle Gas Turbine/Combined Cycle Generating Stations, working capital shall cover:

- (i) Fuel cost for thirty days corresponding to target availability duly taking into account the mode of operation of the Generating Station on gas fuel and liquid fuel;
- (ii) Liquid fuel stock for fifteen days corresponding to target availability;
- (iii) Normative Operation and maintenance expenses for one month;
- (iv) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and
- (v) Receivables for sale of electricity equivalent to forty-five days of the sum of annual fixed charges and energy charges approved in the Tariff Order for ensuing year/s, computed on target availability and excluding incentive, if any:

**minus**

- (vi) Payables for fuel (including liquid fuel stock) to the extent of thirty days of the cost of fuel computed at target availability, depending on the modalities of payment:

Provided that for the purpose of Truing-up, the working capital shall be computed based on the scheduled generation or target availability of the generating Station, whichever is lower:

Provided further that for the purpose of Truing-up for any year, the working capital requirement shall be re-computed on the basis of the values of revised normative Operation & Maintenance expenses and actual Revenue from sale of electricity excluding incentive, if any, and other components of working capital approved by the Commission in the Truing-up before sharing of gains and losses;

- (d) In case of Hydro power Generating Stations including pumped storage hydel electric generating Station, working capital shall cover:
  - (i) Normative Operation and maintenance expenses for one month;
  - (ii) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and
  - (iii) Receivables for sale of electricity equivalent to forty-five days of the annual fixed charges for ensuing year/s, approved in the Tariff Order, computed on normative capacity index and excluding incentive, if any:

Provided that for the purpose of Truing-up for any year, the working capital requirement shall be re-computed on the basis of the values of revised normative Operation & Maintenance expenses and actual Revenue from sale of electricity excluding incentive, if any, and other components of working capital approved by the Commission in the Truing-up before sharing of gains and losses;

- (e) In case of own Generating Stations of the Retail Supply Business, no amount shall be allowed towards receivables, to the extent of supply of power by the Generation Business to the Retail Supply Business, in the computation of working capital in accordance with this Regulation.
- (f) Rate of interest on working capital shall be on normative basis and shall be equal to the Base Rate as on the date on which the Petition for determination of Tariff is filed, plus 150 basis points:

Provided that for the purpose of Truing-up for any year, interest on working capital shall be allowed at a rate equal to the weighted average Base Rate prevailing during the concerned Year plus 150 basis points.

## 32.2 Transmission

- (a) The working capital requirement of the Transmission Licensee shall cover:
  - (i) Normative Operation and maintenance expenses for one month;

- (ii) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and
- (iii) One and a half months equivalent of the expected revenue from transmission charges at the Tariff approved in the Order for ensuing year/s;

**minus**

- (iv) Amount held as security deposits in cash, if any, from Transmission System Users:

Provided further that for the purpose of Truing-up for any year, the working capital requirement shall be re-computed on the basis of the values of revised normative Operation & Maintenance expenses and actual Revenue from Transmission Charges excluding incentive, if any, and other components of working capital approved by the Commission in the Truing-up before sharing of gains and losses;

- (b) Rate of interest on working capital shall be on normative basis and shall be equal to the Base Rate as on the date on which the Petition for determination of Tariff is filed, plus 150 basis points:

Provided that for the purpose of Truing-up for any year, interest on working capital shall be allowed at a rate equal to the weighted average Base Rate prevailing during the concerned Year plus 150 basis points.

### 32.3 Distribution Wires Business

- (a) The working capital requirement of the Distribution Wires Business shall cover:
  - (i) Normative Operation and maintenance expenses for one month;
  - (ii) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and
  - (iii) One and half months equivalent of the expected revenue from charges for use of Distribution Wires at the Tariff approved by the Commission for ensuing year/s;

**minus**

- (iv) Amount held as security deposits in cash from Distribution System Users:

Provided further that for the purpose of Truing-up for any year, the working capital requirement shall be re-computed on the basis of the values of revised normative Operation & Maintenance expenses and actual Revenue from sale of

electricity excluding incentive, if any, and other components of working capital approved by the Commission in the Truing-up before sharing of gains and losses;

- (b) Rate of interest on working capital shall be on normative basis and shall be equal to the Base Rate as on the date on which the Petition for determination of Tariff is filed, plus 150 basis points:

Provided that for the purpose of Truing-up for any year, interest on working capital shall be allowed at a rate equal to the weighted average Base Rate prevailing during the concerned Year plus 150 basis points.

#### 32.4 Retail Supply of Electricity

- (a) The working capital requirement of the Retail Supply Business shall cover:
  - (i) Normative Operation and maintenance expenses for one month;
  - (ii) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and
  - (iii) One and half months equivalent of the expected revenue from sale of electricity at the Tariff approved by the Commission for ensuing year/s, and including revenue from cross-subsidy surcharge and additional surcharge, if any;

**minus**

- (iv) Amount held as security deposits in cash from retail supply consumers;
- (v) One month equivalent of cost of power purchased, including the Transmission Charges and SLDC Charges, based on the annual power procurement plan:

Provided that in case of power procurement from own Generating Stations of the Retail Supply Business, no amount shall be reduced from working capital requirement towards payables, to the extent of supply of power by the Generation Business to the Retail Supply Business, in the computation of working capital in accordance with these Regulations:

Provided further that for the purpose of Truing-up for any year, the working capital requirement shall be re-computed on the basis of the values of revised normative Operation & Maintenance expenses and actual Revenue from sale of electricity excluding incentive, if any, and other components of working capital approved by the Commission in the Truing-up before sharing of gains and losses;

- (b) Rate of interest on working capital shall be on normative basis and shall be equal to the Base Rate as on the date on which the Petition for determination of Tariff is filed, plus 150 basis points:

Provided that for the purpose of Truing-up for any year, interest on working capital shall be allowed at a rate equal to the weighted average Base Rate prevailing during the concerned Year plus 150 basis points.

### 32.5 MSLDC

- (a) The working capital requirement of the MSLDC shall cover:
  - (i) Operation and maintenance expenses for one month;
  - (ii) One and a half months equivalent of the expected revenue from levy of Annual Fixed Charges approved by the Commission for ensuing year/s:

Provided further that for the purpose of Truing-up for any year, the working capital requirement shall be re-computed on the basis of the values of revised normative Operation & Maintenance expenses and actual Revenue from sale of electricity excluding incentive, if any, and other components of working capital approved by the Commission in the Truing-up before sharing of gains and losses;

- (b) Rate of interest on working capital shall be on normative basis and shall be equal to the Base Rate as on the date on which the Petition for determination of Fees and Charges is filed, plus 150 basis points:

Provided that for the purpose of Truing-up for any year, interest on working capital shall be allowed at a rate equal to the weighted average Base Rate prevailing during the concerned Year plus 150 basis points.

- 32.6 For the purpose of Truing-up for each year, the variation between the normative interest on working capital computed at the time of Truing-up and the actual interest on working capital incurred by the Generating Company or Licensee or MSLDC, substantiated by documentary evidence, shall be considered as an efficiency gain or efficiency loss, as the case may be, on account of controllable factors, and shared between it and the respective Beneficiary/ies or consumer as the case may be, in accordance with Regulation 11:

Provided that the Delayed Payment Surcharge and Interest on Delayed Payment as per books of accounts of the Generating Company or Licensee or MSLDC shall be deducted from the actual interest on working capital, before sharing of the efficiency gain or efficiency loss, as the case may be:

Provided also that if actual interest on working capital exceeds the normative interest on working capital, then the interest expenses incurred for funding of Regulatory Assets approved by the Commission shall be deducted from the actual interest on working capital, before sharing of the efficiency gain or efficiency loss, as the case may be.

### **33 Carrying Cost or Holding Cost**

The Commission shall allow Carrying Cost or Holding Cost, as the case may be, on the admissible amounts, with simple interest, at the weighted average Base Rate prevailing during the concerned Year, plus 150 basis points:

Provided that Carrying Cost or Holding Cost shall be allowed on the net entitlement after sharing of efficiency gains and losses as approved after true-up:

Provided further that in case of Distribution Licensees, the Incentive on account of Distribution Losses, as applicable, shall be deducted from the net entitlement, for the purpose of computing Carrying Cost or Holding Cost.

### **34 Income Tax**

34.1 The Income Tax for the Generating Company or Licensee or MSLDC for the regulated business shall be allowed on Return on Equity, including Additional Return on Equity through the Tariff charged to the Beneficiary/ies, subject to the conditions stipulated in Regulations 34.2 to 34.6:

Provided that no Income Tax shall be considered on the amount of efficiency gains and incentive approved by the Commission, irrespective of whether or not the amount of such efficiency gains and incentive are billed separately:

Provided further that no Income Tax shall be considered on the amount of income from Delayed Payment Charges or Interest on Delayed Payment or Income from Other Business, as well as on the income from any source that has not been considered for computing the Aggregate Revenue Requirement:

Provided also that the Income Tax shall be computed for the Generating Company as a whole, and not Unit-wise/Station-wise:

Provided also that the deferred tax liability only before March 31, 2020 shall be allowed by the Commission, whenever they get materialised, after prudence check.

34.2 The rate of Return on Equity, including additional rate of Return on Equity as allowed by the Commission under Regulation 29 of these Regulations shall be grossed up with the effective tax rate of respective financial year.

34.3 The base rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

$$\text{Rate of pre-tax return on equity} = \text{Base rate of Return on Equity} / (1-t),$$

Where “t” is the effective tax rate

34.4 The effective tax rate shall be considered on the basis of actual tax paid in respect of financial year in line with the provisions of the relevant Finance Acts by the concerned Generating Company or Licensee or MSLDC, as the case may be:

Provided that, in case of the Generating Company or Licensee or MSLDC has engaged in any other regulated or unregulated Business or Other Business, the actual tax paid on income from any other regulated or unregulated Business or Other Business shall be excluded for the calculation of effective tax rate:

Provided further that effective tax rate shall be estimated for future year based on actual tax paid as per latest available Audited accounts, subject to prudence check.

34.5 In case of Generating Company or Licensee or MSLDC paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess:

Illustration:-

(a) In case of a Generating Company or Licensee or MSLDC paying Minimum Alternate Tax (MAT) at rate of 21.55% including surcharge and cess:

$$\text{Base rate of return on equity} = 15.50 / (1 - 0.2155) = 19.758\%$$

(b) In case of Generating Company or Licensee or MSLDC paying normal corporate tax including surcharge and cess:

(i) Estimated Gross Income of Company as a whole for FY 2020-21 is Rs. 1,000 crore;

(ii) Income Tax for the year on above is Rs 240 crore;

(iii) Effective Tax Rate for the year 2019-20 = Rs 240 Crore / Rs 1000 Crore = 24%;

(iv) Base rate of return on equity =  $15.50 / (1 - 0.24) = 20.395\%$ .

34.6 Variation between the Income Tax estimated by the Commission for future year during MYT Order and Mid Term Review Order and the Income Tax approved by the

Commission for the respective Year after truing up for respective year, shall be allowed for recovery as part of the Aggregate Revenue Requirement at the time of Mid-term Review or Truing-up, subject to prudence check:

Income Tax on any income stream from sources other than the Business regulated by the Commission shall not constitute a pass-through component in Tariff, and Income Tax on such other income shall be borne by the Generating Company or Licensee or MSLDC, as the case may be.

### **35 Contribution to Contingency Reserves**

35.1 Where the Licensee has made a contribution to the Contingency Reserve, a sum not less than 0.25 per cent and not more than 0.5 per cent of the original cost of fixed assets shall be allowed annually towards such contribution in the calculation of Aggregate Revenue Requirement:

Provided that where the amount of such Contingency Reserves exceeds five (5) per cent of the original cost of fixed assets, no further contribution shall be allowed:

Provided further that such contribution shall be invested in securities authorised under the Indian Trusts Act, 1882 within a period of six months of the close of the Year:

Provided also that if the Licensee does not invest the amount of contribution to Contingency Reserves in authorised securities within a period of six months of the close of the Year, then the contribution allowed in the calculation of Aggregate Revenue Requirement shall be disallowed at the time of true-up:

Provided also that if the Licensee does not invest the amount of contribution to Contingency Reserves in authorised securities for two consecutive Years, then the contribution to Contingency Reserves shall not be allowed in the calculation of Aggregate Revenue Requirement from the subsequent Year onwards.

35.2 The Contingency Reserve shall not be drawn upon during the term of the Licence except to meet such charges on account of:

- (a) Expenses or loss of profits arising out of accidents, strikes or circumstances which the management could not have prevented;
- (b) Expenses on replacement or removal of plant or works other than expenses requisite for normal maintenance or renewal;
- (c) Compensation payable under any law for the time being in force and for which no other provision is made:

Provided that the Distribution Licensee shall obtain the Commission's post-facto approval for drawal of Contingency Reserve by submitting the necessary justification for the drawal of Contingency Reserve along with documentary evidence.

- 35.3 No diminution in the value of Contingency Reserve as mentioned above shall be allowed to be adjusted as a part of Tariff.

### **36 Rebate, Incentive, and Penalties**

- 36.1 For payment of bills of generation Tariff or transmission charges or MSLDC Fees and Charges within 7 days of presentation of bills, through Letter of Credit or otherwise or through NEFT/RTGS, a rebate of 1% on billed amount, excluding the taxes, cess, duties, etc., shall be allowed.

- 36.2 For payment of bills of retail Tariff by the consumers within 7 days of issue of bills, a rebate of 1% on the billed amount, excluding the taxes, cess, duties, etc., shall be allowed.

- 36.3 A discount on the monthly bill (excluding taxes and duties) shall be provided to Low Tension category consumers for payment of electricity bills through various modes of digital payment such as credit cards, debit cards, UPI, BHIM, internet banking, mobile banking, mobile wallets, etc.:

Provided that the rate of such discount shall be stipulated by the Commission in the relevant Tariff Order.

- 36.4 All rebates or incentives earned by the Generating Company or Licensee or MSLDC shall be considered under its Non-Tariff Income, while all rebates or incentives given by the Generating Company or Licensee or MSLDC shall be allowed as an expense for the Generating Company or Licensee or MSLDC.

- 36.5 Penalties paid, if any, by the Generating Company or Licensee shall not be allowed as an expense for the Generating Company or Licensee.

### **37 Delayed Payment Charge and Interest on Delayed Payment**

- 37.1 In case the payment of bills of generation Tariff or transmission charges or MSLDC Fees and Charges by the Beneficiary is delayed beyond a period of 30 days from the date of billing, Delayed Payment Charge on simple interest basis at the Base Rate as on 1<sup>st</sup> of the respective month plus 350 basis points per annum on the billed amount shall be levied for the period of delay by the Generating Company or the Transmission Licensee or MSLDC, as the case may be, notwithstanding anything to the contrary as may have been stipulated in the Agreement or Arrangement with the Beneficiaries.

37.2 In case the payment of bills of retail Tariff by the consumers is delayed beyond a period of 15 days for High Tension consumers and Extra High Tension consumers and 21 days for Low Tension consumers from the date of billing, Delayed Payment Charge on the billed amount, including the taxes, cess, duties, etc., shall be levied on simple interest basis at the rate of 1.25% on the billed amount for the first month of delay:

Provided that for delay in payment of bills of retail Tariff beyond 60 days and up to 90 days from the date of billing, Interest on Delayed Payment on the billed amount, including the Delayed Payment Charges, taxes, cess, duties, etc., shall be levied on simple interest basis at the rate of 12% per annum:

Provided further that for delay in payment of bills of retail Tariff beyond 90 days from the date of billing, Interest on Delayed Payment on the billed amount, including the Delayed Payment Charges, taxes, cess, duties, etc., shall be levied on simple interest basis at the rate of 15% per annum.

37.3 Such Delayed Payment Charge and Interest on Delayed Payment earned by the Generating Company or the Licensee shall not be considered under its Non-Tariff Income.

37.4 Such Delayed Payment Charge paid or payable by the Distribution Licensee to the Generating Company or the Transmission Licensee shall not be allowed as an expense for such Distribution Licensee.

## **PART E: GENERATION**

### **38 Applicability**

38.1 The Regulations specified in this Part shall apply to the determination of Tariff for supply of electricity to a Distribution Licensee from conventional sources of generation and hydel generating stations of capacity exceeding 25 MW:

Provided that determination of Tariff for supply of electricity to a Distribution Licensee from Renewable Energy sources of generation shall be in accordance with terms and conditions specified in the relevant Regulations of the Commission.

38.2 The Commission shall be guided by the terms and conditions contained in this Part in determining the Tariff for supply of electricity by a Generating Company to a Distribution Licensee, in the following cases:

- a) where such Tariff is pursuant to a power purchase agreement or arrangement entered into subsequent to the date of coming into effect of these Regulations; or

- b) where such Tariff is pursuant to a power purchase agreement or arrangement entered into prior to the date of coming into effect of these Regulations, and the Commission has approved such agreement or arrangement and the agreement or arrangement envisages that the Tariff shall be based on the Tariff Regulations prevailing at that time; or
- c) where the Distribution Licensee is engaged in the Business of generation of electricity, in determining the transfer price at which electricity is supplied by the Generation Business of the Distribution Licensee to its Retail Supply Business.

### **39 Petition for determination of Generation Tariff**

39.1 A Generating Company shall file a Petition for determination of Tariff for supply of electricity to Distribution Licensees in accordance with the provisions of **Part B** of these Regulations.

39.2 Tariff in respect of a Generating Station under these Regulations may be determined Stage-wise, Unit-wise or for the whole Generating Station:

Provided that the terms and conditions for determination of Tariff for Generating Stations specified in this Part shall apply in like manner to Stages or Units or the Generating Station, as the case may be.

39.3 Where the Tariff is being determined for a Stage or Unit of a Generating Station, the Generating Company shall adopt a reasonable basis for allocation of capital cost relating to common facilities and allocation of joint and common costs across all Stages or Units, as the case may be:

Provided that the Generating Company shall maintain an Allocation Statement providing the basis for allocation of such costs, which shall be duly audited and certified by the statutory auditors, and submit such audited and certified statement to the Commission along with the Petition for determination of Tariff.

39.4 In the case of existing generating Stations/Units, the Commission may allow the Generating Company; the Tariff based on the approved capital cost as on April 1, 2020 and projected additional capital expenditure for the ensuing Years:

Provided that the Generating Company shall continue to bill the Beneficiaries at the Tariff approved by the Commission and applicable as on March 31, 2020 for the period starting from April 1, 2020 till approval of Tariff by the Commission in accordance with these Regulations.

39.5 The Generating Company shall file the Petition for determination of provisional Tariff for new Generating Station, at least two months prior to the anticipated date of

commercial operation of Generating Unit or Stage or Generating Station as a whole, as the case may be.

- 39.6 The Generating Company shall file a Petition for determination of provisional Tariff for new Generating Station based on capital expenditure incurred and projected to be incurred up to the date of commercial operation and additional capital expenditure incurred, duly certified by the statutory auditors:

Provided that the Petition shall contain details of underlying assumptions for the projected capital cost and additional capital cost, wherever applicable.

- 39.7 In the case of new projects, the Generating Company may be allowed provisional Tariff by the Commission from the anticipated date of commercial operation, based on the projected capital expenditure, subject to prudence check.

- 39.8 If the date of commercial operation is likely to be delayed beyond six months from the date of issue of the order approving the provisional Tariff, the Generating Company may submit a Petition for seeking extension of the validity of the applicability of the provisional Tariff, giving details of the present status of completion and justification for the delay in project completion, which may be considered by the Commission after necessary prudence check.

- 39.9 The Generating Company shall file the Petition for determination of final Tariff for new Generating Station within six months from the date of commercial operation of Generating Unit or Stage or Generating Station as a whole, as the case may be, based on the audited capital expenditure and capitalisation as on the date of commercial operation:

Provided that in case of more than one Unit in the Generating Station, such Petition shall be filed for each Unit as and when such Unit achieves COD and without waiting for the COD of the entire Station.

- 39.10 The final Tariff determination for the new Generating Station shall be done by the Commission based on prudence check of the audited capital expenditure and capitalisation as on the date of commercial operation.

- 39.11 Where the actual Capital Cost incurred on year to year basis is less than the Capital Cost approved for determination of provisional Tariff by the Commission, by five percent or more, the Generating Company shall refund to the Beneficiaries the excess Tariff realised corresponding to excess Capital Cost, along with interest at the Base Rate, as prevalent on the first day of April of the respective Year, plus 150 basis points.

- 39.12 Where the actual Capital Cost incurred on year to year basis is more than the Capital Cost approved for determination of provisional Tariff by the Commission, by five percent or more, the Generating Company shall, subject to the approval of the

Commission, recover from the Beneficiaries the shortfall in Tariff corresponding to such decrease in Capital Cost, along with interest at the Base Rate, as prevalent on the first day of April of the respective Year, plus 150 basis points.

- 39.13 In relation to multi-purpose hydroelectric Projects, with irrigation, flood control and power components, the capital cost chargeable to the power component of the Project only shall be considered for determination of Tariff.

#### **40 Fuel Utilisation Plan**

- 40.1 The Generating Company shall prepare and submit Fuel Utilisation Plan for the Control Period commencing on April 1, 2020, along with the Petition for determination of Tariff for the Control Period from April 1, 2020 to March 31, 2025, in accordance with **Part A** of these Regulations, to the Commission for approval.

- 40.2 The Fuel Utilisation Plan should ensure that fuel quantum is allocated to different generating Stations/Units in accordance with the merit order of different generation Stations/Units in terms of variable cost:

Provided that the fuel allocation should be such that, subject to system and other constraints, the least cost generating Stations/Units are operated at maximum availability and other generating Stations/Units are operated at maximum availability thereafter in the ascending order of variable cost

- 40.3 The Fuel Utilisation Plan shall comprise the following:

- (a) Forecast of fuel requirement for each unit/station;
- (b) Details of contracted source, annual contracted quantity, estimated availability from contracted sources and resultant shortage of fuel, if any, for each unit/station;
- (c) Use of optimum mix of fuel;
- (d) Alternate arrangement for meeting shortage of fuel along with impact on variable cost of unit/station;
- (e) Plan for swapping of fuel source for optimising the cost, if any, along with detailed justification and cost savings;
- (f) Net cost savings in variable cost of each unit, if any, after optimum utilisation of Fuel:

Provided that the forecast or estimates for the Control Period from FY 2020-21 to FY 2024-25 shall be prepared for each month over the Control Period:

Provided further that Fuel Utilisation Plan shall be prepared based on past data and reasonable assumptions for future.

- 40.4 The beneficiary/ies shall file comments/suggestions on such Plan during proceedings of Tariff Petition as per Regulation 13.
- 40.5 The Commission shall approve the Fuel Utilisation Plan and rationalise the variable cost of generation for Generating Unit/Station based on such Plan and suggestions and comments received from the beneficiary/ies for the Control Period as part of its Order on the MYT Petition.
- 40.6 A Generating Company shall maintain data of actual performance of Unit/Station wise Fuel Utilisation vis-à-vis Fuel Utilisation plan approved by the Commission, along with justification for variation between approved and actual fuel utilisation plan and, shall put up such data within fifteen days from the end of each month, on the internet website of the Generating Company.
- 40.7 A Generating Company may, as a result of additional information not previously known or available to it at the time of submission of the Fuel Utilisation Plan under Regulation 40.1, apply for modification in the Fuel Utilisation Plan for the remaining part of the Control Period, as part of its Petition for Mid-term Review under Regulation 8:
- 40.8 The Commission may, as a result of additional information not previously known or available to the Commission at the time of approval of the Fuel Utilisation Plan under Regulation 40.1, if it deems appropriate, *suo motu* or on a Petition filed by the Generating Company, modify the Fuel Utilisation Plan for the remainder of the Control Period, as part of the Mid-term Review.
- 40.9 At time of truing up of respective year, the Commission shall scrutinise the implementation of actual Fuel Utilisation Plan vis-à-vis approved plan, deviations, if any, and justification submitted by a Generating Company thereon and; may disallow the variable cost of generation on account of operational inefficiencies in utilisation of fuel.

#### **41 Components of Tariff**

- 41.1 The Tariff for sale of electricity from a thermal power Generating Station shall comprise two parts, namely, Annual Fixed Charge and Energy Charge.
- 41.2 The Tariff for sale of electricity from a hydel Generating Station shall comprise two parts, namely, Capacity Charge and Energy Charge.

#### **42 Annual Fixed Charges**

The Annual Fixed Charges shall comprise the following components:

- (a) Operation & Maintenance Expenses;

- (b) Depreciation;
- (c) Interest on Loan Capital;
- (d) Interest on Working Capital;
- (e) Return on Equity Capital;
- (f) Income Tax;

**Less:**

- (g) Non-Tariff Income:

Provided that Depreciation, Interest on Loan Capital, Interest on Working Capital, Return on Equity, and Income tax for Thermal and Hydro Generating Stations shall be allowed, in accordance with the provisions specified in **Part D** of these Regulations:

Provided further that prior period income/expenses shall be allowed by the Commission at the time of Truing-up based on audited accounts, on a case to case basis, if the income/expenses in that prior period have been allowed on actual basis, subject to prudence check:

Provided also that all penalties and compensation payable by the Generating Company to any party for failure to comply with any directions or for damages, as a consequence of the orders of the Commission, Courts, etc., shall not be allowed to be recovered through the Aggregate Revenue Requirement:

Provided also that the Generating Company shall maintain separate details of such penalties and compensation paid or payable by the Generating Company, if any, and shall submit them to the Commission along with its Petition.

### **43 Renovation & Modernisation**

- 43.1 For undertaking Renovation and Modernisation for the purpose of extension of life beyond the useful life of the Generating Station or a Unit thereof, the Generating Company shall file a Petition for approval 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, record of consultation with Beneficiaries and consent received from the Beneficiaries, and any other relevant information.
- 43.2 Approval of such proposal for Renovation and Modernisation shall be granted after consideration of reasonableness of the cost estimates, schedule of completion, use of

efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission.

- 43.3 In case of gas/ liquid fuel based open/combined cycle thermal generating Unit, any expenditure, which has become necessary for renovation of gas turbines/steam turbine and any expenditure necessitated due to obsolescence or non-availability of spares for efficient operation of the stations shall be allowed:

Provided that any expenditure included in the Renovation and Modernisation on consumables and cost of components and spares, which is generally covered in the O&M expenses during the major overhaul of gas turbine, shall be suitably deducted after prudence check, from the Renovation and Modernisation expenditure to be allowed.

- 43.4 The expenditure approved by the Commission after prudence check based on the estimates of Renovation and Modernisation 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.

#### **44 Sale of Infirm Power**

The supply of Infirm Power shall be accounted as deviation and shall be paid at Charges for Deviation for Infirm Power in accordance with the Maharashtra Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2019:

Provided that any revenue earned by the Generating Company from supply of Infirm Power after accounting for the fuel cost shall be used for reduction in Capital Cost and shall not be treated as revenue.

#### **45 Non-Tariff Income**

- 45.1 The amount of Non-Tariff Income of the Generating Company as approved by the Commission shall be deducted while determining its Annual Fixed Charge:

Provided that the Generating Company shall submit full details of its forecast of Non-Tariff Income to the Commission in such form as may be stipulated by the Commission.

- 45.2 The Non-Tariff Income shall include:
- a) Income from rent of land or buildings;
  - b) Income from sale of scrap;
  - c) Income from investments;
  - d) Income from sale of ash/rejected coal;

- e) Interest income on advances to suppliers/contractors;
- f) Net Income from supply of electricity by the Generating Company to the housing colonies of its operating staff and supply of electricity by the Generating Company for construction works at the generating Station, after adjusting the expenses incurred for supply of such electricity;
- g) Income from rental from staff quarters;
- h) Income from rental from contractors;
- i) Income from hire charges from contractors and others;
- j) Income from advertisements;
- k) Income from sale of tender documents;
- l) Any other Non-Tariff Income:

Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated Business of the Generating Company shall not be included in Non-Tariff Income:

Provided further that all supply of electricity by the Generating Company to the housing colonies of its operating staff and for construction works at the generating Station, shall be metered and billed separately:

Provided also that the tariff for supply of electricity by the Generating Company to the housing colonies of its operating staff and supply of electricity by the Generating Company for construction works at the generating Station, shall be the same as the Tariff approved by the Commission for the supply of electricity to the respective consumer category by the Distribution Licensee for that area of supply.

#### **46 Operational Norms for Thermal Generating Stations**

- 46.1 Target Availability for full recovery of Annual Fixed Charges shall be **85 per cent for all thermal Generating Stations**, except those covered under Regulation 46.2.
- 46.2 Target Availability for full recovery of Annual Fixed Charges for the following Generating Stations of Maharashtra State Power Generation Company Ltd. (MSPGCL) shall be:

<b>Particulars</b>	<b>Target Availability (%)</b>
Koradi TPS excluding Unit No. 8, 9 and 10	72.00
Chandrapur TPS excluding Unit No. 8 and 9	80.00
Nashik TPS	80.00

Particulars	Target Availability (%)
Bhusawal TPS excluding Unit No. 4 and 5	80.00
Parli TPS excluding Unit No. 6, 7 and 8	80.00

Provided that the Commission may revise the Availability norms for these Generating Stations in case any Renovation & Modernisation is undertaken.

46.3 Target Plant Load Factor for incentive for thermal Generating Stations/Units shall be **85 per cent**.

46.4 Gross Station Heat Rate for existing coal-based thermal Generating Stations, other than those covered under Regulation 46.5 and 46.6 shall be:

200/210/250 MW sets	300 MW sets	500 MW sets (sub-critical boilers)	600 MW and above sets (super-critical boilers)
2430 kcal/kWh	2400 kcal/kWh	2375 kcal/kWh	2230 kcal/kWh

**Note 1**

In respect of 500 MW Units, where the boiler feed pumps are electrically operated, the Gross Station Heat Rate shall be 40 kcal/kWh lower than the gross Station Heat Rate specified above.

**Note 2**

For Generating Stations having combination of 200/210/250 MW sets and 300 MW and 500 MW sets, the normative gross Station Heat Rate shall be the weighted average Station Heat Rate.

46.5 Gross Station Heat Rate for existing coal-based thermal Generating Stations of Maharashtra State Power Generation Company Ltd. (MSPGCL) shall be:

(kcal/kWh)					
Koradi excluding Unit No. 8, 9 and 10	Khaperkheda excluding Unit No. 5	Chandrapur excluding Unit No. 8 and 9	Nashik	Bhusawal excluding Unit No. 4 and 5	Parli excluding Unit No. 6, 7 and 8
2622	2630	2688	2754	2787	2886

Provided that the Commission may revise the Gross Station Heat Rate norms for these Generating Stations in case any Renovation & Modernisation is undertaken.

46.6 Gross Station Heat Rate for existing thermal Generating Unit 5 of The Tata Power Company Ltd.-Generation Business (TPC-G) shall be 2549 kcal/kWh.

46.7 Gross Station Heat Rate for existing Gas Turbine/Combined Cycle Generating Station/Unit shall be:

<b>(kcal/kWh)</b>		
<b>Mode of operation</b>	<b>Uran GTPS of MSPGCL</b>	<b>Unit-7 of TPC-G</b>
Combined Cycle	2035	2035
Open Cycle	2900	2900

46.8 Gross Station Heat Rate for New Coal and Lignite based thermal power Generating Stations /Units achieving COD after April 1, 2020 shall be equal to **1.05 times the Design Heat Rate** (kcal/kWh);

Where the Design Heat Rate of a Unit means the Unit Heat Rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/back pressure:

Provided that the Design Heat Rate shall not exceed the following maximum design Unit Heat Rates depending upon the pressure and temperature ratings of the Units:

<b>Pressure Rating (kg/cm<sup>2</sup>)</b>	<b>150</b>	<b>170</b>	<b>170</b>	<b>247</b>
SHT/RHT (°C)	535/535	537/537	537/565	537/565
Type of Boiler Feed Pump	Electrical Driven	Turbine driven	Turbine driven	Turbine driven
Maximum Turbine Cycle Heat Rate (kcal/kWh)	1955	1950	1935	1900
<b>Minimum Boiler Efficiency</b>				
Sub-Bituminous Indian Coal	0.86	0.86	0.86	0.86
Bituminous Imported Coal	0.89	0.89	0.89	0.89
<b>Maximum Design Unit Heat Rate (kcal/kWh)</b>				
Sub-Bituminous Indian Coal	2273	2267	2250	2222
Bituminous Imported Coal	2197	2191	2174	2135

<b>Pressure Rating (kg/cm<sup>2</sup>)</b>	<b>247</b>	<b>270</b>	<b>270</b>
SHT/RHT (°C)	565/593	593/593	600/600
Type of Boiler Feed Pump	Turbine driven	Turbine driven	Turbine driven

<b>Pressure Rating (kg/cm<sup>2</sup>)</b>	<b>247</b>	<b>270</b>	<b>270</b>
Maximum Turbine Cycle Heat Rate (kcal/kWh)	1850	1810	1800
<b>Minimum Boiler Efficiency</b>			
Sub-Bituminous Indian Coal	0.86	0.865	0.865
Bituminous Imported Coal	0.89	0.895	0.895
<b>Maximum Design Unit Heat Rate (kcal/kWh)</b>			
Sub-Bituminous Indian Coal	2151	2105	2081
Bituminous Imported Coal	2078	2034	2022

Provided further that in case pressure and temperature parameters of a Unit are different from above ratings, the maximum design Unit Heat Rate of the nearest class shall be taken:

Provided also that where Unit Heat Rate has not been guaranteed but turbine cycle Heat Rate and boiler efficiency are guaranteed separately by the same supplier or different suppliers, the Unit Design Heat Rate shall be arrived at by using guaranteed turbine cycle Heat Rate and boiler efficiency:

Provided also that where the boiler efficiency is below 86% for sub-bituminous Indian coal and 89% for bituminous imported coal, the same shall be considered as 86% and 89%, respectively, for sub-bituminous Indian coal and bituminous imported coal for computation of Gross Station Heat Rate:

Provided also that maximum turbine cycle Heat Rate shall be adjusted for type of dry cooling system:

Provided also that if one or more Units are declared under commercial operation prior to the date of coming into effect of these Regulations, the Heat Rate norms for those Units as well as Units declared under commercial operation on or after the effectiveness of these Regulations shall be lower of the Heat Rate norms arrived at by the above methodology and the norms specified in Regulation 46.4:

Provided also that in case of lignite-fired Generating Stations (including stations based on Circulating Fluidised Bed Combustion [CFBC] technology), maximum design Heat Rates shall be increased using the following factors for moisture content:

- a) For lignite having 50% moisture: 1.10
- b) For lignite having 40% moisture: 1.07

c) For lignite having 30% moisture: 1.04

For other values of moisture content, multiplying factor shall be pro-rated for moisture content between 30-40% and 40-50% depending upon the rated values of multiplying factor for the respective range given under sub-clauses (a) to (c) above.

Note: In respect of Units where the boiler feed pumps are electrically operated, the maximum design Unit Heat Rate shall be 40 kcal/kWh lower than the maximum design Unit Heat Rate specified above with turbine driven boiler feed pumps.

46.9 Gross Station Heat Rate for New Gas-based/Liquid-based Thermal Generating Unit(s) achieving COD after April 1, 2020 shall be:

= 1.05 x Design Heat Rate of the Unit/Block for Natural Gas and Regassified Liquefied Natural Gas (RLNG) (in kcal/kWh)

= 1.071 x Design Heat Rate of the Unit/Block for Liquid Fuel (kcal/kWh)

Where the Design Heat Rate of a Unit shall mean the guaranteed Heat Rate for a Unit at 100% MCR and at site ambient conditions; and the Design Heat Rate of a Block shall mean the guaranteed Heat Rate for a Block at 100% MCR, site ambient conditions, zero percent make up, design cooling water temperature/back pressure.

46.10 In case a Generating Station or Unit is directed by MSLDC to operate below normative loading but at or above technical minimum schedule on account of grid security or due to the lower schedule given by the Beneficiaries, increase in Gross Station Heat Rate may be considered by the Commission on case to case basis at time of truing up, subject to prudence check.

46.11 Secondary fuel oil consumption norm for all thermal Generating Stations, except those covered under Regulation 46.12 shall be:

a) Coal-based Generating Stations: 0.50 ml/kWh

b) Lignite-fired Generating Stations except stations based on CFBC technology: 1.5 ml/kWh

c) Lignite-fired Generating Stations based on CFBC technology: 1.0 ml/kWh

46.12 Secondary fuel oil consumption norm for the following MSPGCL Stations shall be:

<b>Stations</b>	<b>Secondary Fuel Oil Consumption (ml/kWh)</b>
Koradi TPS excluding Unit No. 8, 9 and 10	2.81
Khaperkheda TPS excluding Unit No. 5	1.20
Chandrapur TPS excluding Unit No. 8 and 9	1.00

<b>Stations</b>	<b>Secondary Fuel Oil Consumption (ml/kWh)</b>
Nashik TPS	1.00
Bhusawal TPS excluding Unit No. 4 and 5	1.40
Parli TPS excluding Unit No. 6, 7 and 8	2.00

Provided that the Commission may revise the secondary fuel oil consumption norms for these Generating Stations in case any Renovation & Modernisation is undertaken.

46.13 Auxiliary Energy Consumption for new coal-based thermal Generating Stations shall be as given in the Table below:

<b>Particulars</b>	<b>With Natural Draft cooling tower or without cooling tower</b>
<b>(i) 200/250 MW series</b>	8.50%
<b>(ii) 300/330/350/500 MW &amp; above</b>	
Steam driven boiler feed pumps	5.75%
Electrically driven boiler feed pumps	8.00%

Provided that for thermal Generating Stations with induced draft cooling towers and where tube type coal mill is used, the norms shall be further increased by 0.5% and 0.8%, respectively:

Provided further that additional Auxiliary Energy Consumption as follows may be allowed for plants with Dry Cooling Systems:

<b>Type of Dry Cooling System</b>	<b>(% of gross generation)</b>
Direct cooling air cooled condensers with mechanical draft fans	1.0%
Indirect cooling system employing jet condensers with pressure recovery turbine and natural draft tower	0.5%

Provided also that for thermal Generating Stations with Flue Gas De-sulphuriser (FGD), additional Auxiliary Energy Consumption shall be allowed as follows:

200/250 MW series: 1.2%

300/330/350/500 MW & above: 1.0%

Provided also that for thermal Generating Stations with any additional equipment that has been mandated by Statutory Authorities, additional Auxiliary Energy Consumption shall be allowed on case to case basis after prudence check.

46.14 Auxiliary Energy Consumption for the following coal-based thermal Generating Stations of MSPGCL shall be as given in the Table below:

<b>Stations</b>	<b>Auxiliary Energy Consumption</b>
Koradi TPS excluding Unit No. 8, 9 and 10	10.81%
Khaperkheda TPS excluding Unit No. 5	9.70%
Chandrapur TPS excluding Unit No. 8 and 9	7.80%
Nashik TPS	10.75%
Bhusawal TPS excluding Unit No. 4 and 5	10.96%
Parli TPS excluding Unit No. 6, 7 and 8	12.65%

Provided that the Commission may revise the auxiliary energy consumption norms for these Generating Stations in case any Renovation & Modernisation is undertaken.

46.15 Auxiliary Energy Consumption for other existing coal-based thermal Generating Stations shall be as given in the Table below:

<b>Particulars</b>	<b>With Natural Draft cooling tower or without cooling tower</b>
<b>(i) 200/250 MW series</b>	8.50%
<b>(ii) 300/500 MW &amp; above</b>	
Steam driven boiler feed pumps	6.00%
Electrically driven boiler feed pumps	8.50%

Provided that for thermal Generating Stations with induced draft cooling towers and where tube type coal mill is used, the norms shall be further increased by 0.5% and 0.8%, respectively:

Provided further that additional Auxiliary Energy Consumption as follows may be allowed for plants with Dry Cooling Systems:

<b>Type of Dry Cooling System</b>	<b>(% of gross generation)</b>
Direct cooling air cooled condensers with mechanical draft fans	1.0%
Indirect cooling system employing jet condensers with pressure recovery turbine and natural draft tower	0.5%

Provided also that for thermal Generating Stations with Flue Gas De-sulphuriser (FGD), additional Auxiliary Energy Consumption shall be allowed as follows:

200/250 MW series: 1.2%

300/330/350/500 MW & above: 1.0%

Provided also that for thermal Generating Stations with any additional equipment that has been mandated by Statutory Authorities, additional Auxiliary Energy Consumption shall be allowed on case to case basis after prudence check.

46.16 Auxiliary Energy Consumption for Gas Turbine/Combined Cycle Generating Stations/Units shall be:

(a) Combined cycle : 2.75%

(b) Open cycle : 1.00%

Provided that where the gas based generating station is using electric motor driven Gas Booster Compressor, the Auxiliary Energy Consumption in case of Combined Cycle mode shall be 3.30% (including impact of air-cooled condensers for Steam Turbine Generators):

Provided further that an additional Auxiliary Energy Consumption of 0.35% shall be allowed for Combined Cycle Generating Stations having direct cooling air cooled condensers with mechanical draft fans.

46.17 Auxiliary Energy Consumption for Lignite-fired thermal Generating Stations/Units shall be 0.5 percentage points higher than the auxiliary energy consumption norms of coal based Generating Stations specified in Regulation 46.13:

Provided that for the lignite fired stations using CFBC technology, the auxiliary energy consumption norms shall be 1.5 percentage points higher than the auxiliary energy consumption norms of coal based Generating Stations specified in Regulation 46.13.

#### **46.18 Transit and handling Losses**

Normative transit and handling losses for coal/lignite based Generating Stations, as a percentage of quantity of coal or lignite dispatched by the coal/lignite supply company during the month shall be:

(a) Pit head Generating Stations : 0.2%

(b) Non-pit head Generating Stations : 0.8%

Provided that in case of pit head stations if coal or lignite is procured from sources other than the pit head mines, which is transported to the Station through rail, normative transit loss of 0.8% shall be applicable:

Provided further that the above norms shall be applicable for domestic coal and washed coal:

Provided also that in case of imported coal, the normative transit and handling losses shall be 0.2%:

Provided also that for procurement of coal on delivery basis, no transit and handling loss shall be allowed.

## **47 Operation and maintenance expenses for Thermal Generating Stations**

### **47.1 Generating Stations/Units that achieved COD before August 26, 2005**

- a) The Operation and Maintenance expenses for Generating Stations which achieved COD before the date of coming into effect of the MERC (Terms and Conditions of Tariff) Regulations, 2005, shall be computed in accordance with this Regulation.
- b) The Operation and Maintenance expenses excluding water charges and including insurance shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/deducting the share of efficiency gains/losses, for the three Years ending March 31, 2019, excluding abnormal Operation and Maintenance expenses, if any, subject to prudence check by the Commission:

Provided that the average of such Operation and Maintenance expenses shall be considered as Operation and Maintenance expenses for the Year ended March 31, 2018, and shall be escalated at the respective escalation rate for FY 2018-19 and FY 2019-20, to arrive at the Operation and Maintenance expenses for the base year ending March 31, 2020:

Provided further that the escalation rate for FY 2018-19 and FY 2019-20 shall be computed by considering 50% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 50% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years as per the Labour Bureau, Government of India:

Provided also that at the time of true-up for each Year of this Control Period, the Operation and Maintenance expenses, excluding water charges and including

insurance, shall be derived on the basis of the Final Trued-up Operation and Maintenance expenses after adding/deducting the sharing of efficiency gains/losses, for the base year ending March 31, 2020, excluding abnormal expenses, if any, subject to prudence check by the Commission, and shall be considered as the Base Year Operation and Maintenance expenses.

- c) The Operation and Maintenance expenses for each subsequent year shall be determined by escalating these Base Year expenses of FY 2019-20 by an inflation factor with 50% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 50% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the past five financial years as per the Labour Bureau, Government of India, as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, to arrive at the permissible Operation and Maintenance expenses for each year of the Control Period:

Provided that, in the Truing-up of the O&M expenses for any particular year of the Control Period, an inflation factor with 50% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years (including the year of Truing-up) and 50% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years (including the year of Truing-up), as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, shall be applied to arrive at the permissible Operation and Maintenance Expenses for that year:

Provided further that the efficiency factor shall be considered as zero, in case the Availability Factor of all Generating Units/Stations of the Generating Company is higher than NAPAF, or there is an improvement in the Availability Factor of all Generating Units/Stations of the Generating Company of at least 2 percent annually over the last 3 years, in case the Availability Factor of all Generating Units/Stations of the Generating Company is lower than NAPAF.

- d) Water Charges shall be allowed separately as per actuals, based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check:

Provided that in the MYT Order, the Commission shall provisionally approve the Water Charges for each year of the Control Period based on the actual Water Charges as per latest Audited Accounts available for the Generating Company, subject to prudence check.

- e) The impact of Wage Revision, if any, may be considered at the time of true-up for any Year, based on documentary evidence and justification to be submitted by the Petitioner:

Provided that if actual employee expenses are higher than normative expenses on this account, then no sharing of efficiency losses shall be done to that extent:

Provided further that efficiency gains shall not be allowed by deducting the impact of Wage Revision and comparison of such reduced value with normative value.

- f) Provisioning of wage revision expenses shall not be considered as actual expenses at the time of true-up, and only expenses as actually incurred shall be considered.

- g) A Generating Company may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:

Provided that the Generating Company shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.

#### 47.2 New Generating Stations and Generating Stations that achieved COD on or after August 26, 2005

- a) For Coal based Generating Stations:

Rs. Lakh/MW

Particulars	200/210/250 MW Sets	300/330/350 MW Sets	500 MW Sets	600/660 MW Sets	800 MW and above
FY 2020-21	27.89	21.08	18.54	14.99	13.49
FY 2021-22	28.89	21.84	19.21	15.53	13.97
FY 2022-23	29.93	22.63	19.90	16.09	14.48
FY 2023-24	31.01	23.44	20.62	16.67	15.00
FY 2024-25	32.13	24.29	21.36	17.27	15.54

Provided that for the Generating Stations having combination of above Sets, the weighted average value for operation and maintenance expenses shall be allowed:

Provided further that the norms shall be multiplied by the following factors for arriving at norms of O&M expenses for additional Units in respective Unit sizes for the Units whose COD occurs on or after 1.4.2020 in the same Station:

200/210/250 MW	Additional 5 <sup>th</sup> & 6 <sup>th</sup> Units	0.90
	Additional 7 <sup>th</sup> & more Units	0.85
300/330/350 MW	Additional 4 <sup>th</sup> & 5 <sup>th</sup> Units	0.90
	Additional 6 <sup>th</sup> & more Units	0.85
500 MW and above	Additional 3 <sup>rd</sup> & 4 <sup>th</sup> Units	0.90
	Additional 5 <sup>th</sup> & above Units	0.85

b) For Lignite based Generating Stations:

Rs. Lakh/MW

Particulars	Lignite based Unit/Stations
FY 2020-21	17.08
FY 2021-22	17.69
FY 2022-23	18.33
FY 2023-24	18.99
FY 2024-25	19.68

c) Gas Turbine/Combined Cycle Generating Stations

Rs. Lakh/MW

Particulars	Gas Turbine/Combined Cycle Generating Stations	Small Gas Turbine Generating Stations (less than 50 MW Unit size)	Advance F Class Machines
FY 2020-21	15.63	16.80	12.22
FY 2021-22	16.19	17.41	12.66
FY 2022-23	16.77	18.03	13.12
FY 2023-24	17.38	18.68	13.59
FY 2024-25	18.00	19.36	14.08

#### 48 Operational Norms for Hydro Generating Stations

48.1 The following Normative Annual Plant Availability Factor (NAPAF) shall apply to hydel Generating Stations:

Sl.	Particulars	Normative Annual Plant Availability Factor
a)	Storage and Pondage type plants with head variation between Full Reservoir	90%

<b>Sl.</b>	<b>Particulars</b>	<b>Normative Annual Plant Availability Factor</b>
	Level (FRL) and Minimum Draw Down Level (MDDL) of up to 8%, and where plant availability is not affected by silt	
b)	Storage and Pondage type plants with head variation between FRL and MDDL of more than 8%, and where plant availability is not affected by silt	The month-wise peaking capacity as provided by the Project authorities in the Detailed Project Report, approved by the relevant authority, shall form the basis of fixation of NAPAF.
c)	Pondage type plants where plant availability is significantly affected by silt	85%
d)	Run-of-river type plants	To be determined plant-wise, based on 10-day design energy data, moderated by past experience where available/relevant

Provided that a further allowance may be made by the Commission in NAPAF determination under special circumstances, e.g., abnormal silt problem or other operating conditions, and known plant limitations.

- 48.2 In case of Pumped storage hydel generating stations, the quantum of electricity required for pumping water from down-stream reservoir to up-stream reservoir shall be arranged by the Beneficiary/ies duly taking into account the transmission losses and distribution losses up to the bus bar of the generating Station, and in return, Beneficiaries shall be entitled to energy equivalent to 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir, from the generating Station during peak hours and the generating Station shall be under obligation to supply such quantum of electricity during peak hours:

Provided that in the event of the Beneficiaries failing to supply the desired level of energy during off-peak hours, there will be pro-rata reduction in their energy entitlement from the Station during peak hours.

- 48.3 The following Normative Auxiliary Energy Consumption shall apply to hydel Generating Stations:

<b>Type of Station</b>	<b>Installed Capacity above 200 MW</b>	<b>Installed Capacity up to 200 MW</b>
<b>Surface Hydro Generating Station</b>		
Rotating Excitation	0.7%	0.7%
Static Excitation	1.0%	1.2%
<b>Underground Hydro Generating Station</b>		
Rotating Excitation	0.9%	0.9%
Static Excitation	1.2%	1.3%

## **49 Operation and Maintenance Expenses for Hydro Generating Stations**

### **49.1 For Existing Stations:**

- a) The Operation and Maintenance expenses shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/deducting the share of efficiency gains/losses, for the three Years ending March 31, 2019, excluding abnormal Operation and Maintenance expenses, if any, subject to prudence check by the Commission:

Provided that the average of such Operation and Maintenance expenses shall be considered as Operation and Maintenance expenses for the Year ended March 31, 2018, and shall be escalated at the respective escalation rate for FY 2018-19 and FY 2019-20, to arrive at the Operation and Maintenance expenses for the base year ending March 31, 2020:

Provided further that the escalation rate for FY 2018-19 and FY 2019-20 shall be computed by considering 50% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 50% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years as per the Labour Bureau, Government of India:

Provided also that at the time of true-up for each Year of this Control Period, the Operation and Maintenance expenses, including insurance, shall be derived on the basis of the Final Trued-up Operation and Maintenance expenses, after adding/deducting the sharing of efficiency gains/ losses, for the year ending March 31, 2020, excluding abnormal expenses, if any, subject to prudence check by the Commission, and shall be considered as the Base Year Operation and Maintenance expenses.

- b) The Operation and Maintenance expenses for each subsequent year and in the Truing-up of the respective years of the Control Period shall be determined in the same manner as specified in Regulation 47.1 (c).
- c) The Operation and Maintenance expenses incurred by the Generating Company on its housing colonies and related expenses, including medical and other facilities, and on their operating staff shall be excluded from (a) and (b) above and allowed separately, subject to prudence check.
- d) The impact of Wage Revision, if any, may be considered at the time of true-up for any Year, based on documentary evidence and justification to be submitted by the Petitioner:

Provided that if actual employee expenses are higher than normative expenses on this account, then no sharing of efficiency losses shall be done to that extent:

Provided further that efficiency gains shall not be allowed by deducting the impact of Wage Revision and comparison of such reduced value with normative value.

- e) Provisioning of wage revision expenses shall not be considered as actual expenses at the time of true-up, and only expenses as actually incurred shall be considered.
- f) A Generating Company may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:

Provided that the Generating Company shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.

#### **49.2 For New Stations:**

- a) The Operation and Maintenance expenses shall be fixed at 2% of the original Project cost (excluding cost of rehabilitation and resettlement works) for the first year of commercial operation, which shall be considered as the Base Year Operation and Maintenance expenses.
- b) The Operation and Maintenance expenses for each subsequent year and in the Truing-up of the respective years of the Control Period shall be determined in the same manner as specified in Regulation 47.1 (c).

## 50 Computation and Payment of Capacity Charges and Energy Charges for Thermal Generating Stations

### A. Capacity Charges

50.1 The fixed cost of a thermal generating station shall be computed on annual basis based on the 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 or allocation in the capacity of the generating station. The Capacity Charge shall be recovered under two segments of the year, i.e., High Demand Season (period of three months) and Low Demand Season (period of remaining nine months), and within each season in two parts, viz., Capacity Charge for Peak Hours of the month and Capacity Charge for Off-Peak Hours of the month as follows:

Capacity Charge for the Year ( $CC_y$ ) = Sum of Capacity Charge for three months of High Demand Season + Sum of Capacity Charge for nine months of Low Demand Season

50.2 The Capacity Charge payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

Capacity Charge for the Month ( $CC_m$ ) = Capacity Charge for Peak Hours of the Month ( $CC_p$ ) + Capacity Charge for Off-Peak Hours of the Month ( $CC_{op}$ )

Where,

#### **High Demand Season:**

$$CC_{p1} = (0.20 \times AFC) \times \left(\frac{1}{12}\right) \times \left(\frac{PAFMp1}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC) \times \left(\frac{1}{12}\right)$$

$$CC_{p2} = \{(0.20 \times AFC) \times \left(\frac{1}{6}\right) \times \left(\frac{PAFMp2}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC) \times \left(\frac{1}{6}\right)\} - CC_{p1}$$

$$CC_{p3} = \{(0.20 \times AFC) \times \left(\frac{1}{4}\right) \times \left(\frac{PAFMp3}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC) \times \left(\frac{1}{4}\right)\} - (CC_{p1} + CC_{p2})\}$$

$$CC_{op1} = \{(0.80 \times AFC) \times \left(\frac{1}{12}\right) \times \left(\frac{PAFMop1}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC) \times \left(\frac{1}{12}\right)\}$$

$$CC_{op2} = \{(0.80 \times AFC) \times \left(\frac{1}{6}\right) \times \left(\frac{PAFMop2}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC) \times \left(\frac{1}{6}\right)\} - CC_{op1}$$

$$CC_{op3} = \{(0.80 \times AFC) \times \left(\frac{1}{4}\right) \times \left(\frac{PAFMop3}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC) \times \left(\frac{1}{4}\right)\} - (CC_{op1} + CC_{op2})\}$$

#### **Low Demand Season:**

$$CC_{p1} = \{(0.20 \times AFC) \times \left(\frac{1}{12}\right) \times \left(\frac{PAFMp1}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC) \times \left(\frac{1}{12}\right)\}$$

$$CC_{p2} = \{(0.20 \times AFC)x \left(\frac{1}{6}\right) x \left(\frac{PAFMp2}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC)x \left(\frac{1}{6}\right)\} - CC_{p1}$$

$$CC_{p3} = \{(0.20 \times AFC)x \left(\frac{1}{4}\right) x \left(\frac{PAFMp3}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC)x \left(\frac{1}{4}\right)\} - (CC_{p1} + CC_{p2})$$

$$CC_{p4} = \{(0.20 \times AFC)x \left(\frac{1}{3}\right) x \left(\frac{PAFMp4}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC)x \left(\frac{1}{3}\right)\} - (CC_{p1} + CC_{p2} + CC_{p3})$$

$$CC_{p5} = \{(0.20 \times AFC)x \left(\frac{5}{12}\right) x \left(\frac{PAFMp5}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC)x \left(\frac{5}{12}\right)\} - (CC_{p1} + CC_{p2} + CC_{p3} + CC_{p4})$$

$$CC_{p6} = \{(0.20 \times AFC)x \left(\frac{1}{2}\right) x \left(\frac{PAFMp6}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC)x \left(\frac{1}{2}\right)\} - (CC_{p1} + CC_{p2} + CC_{p3} + CC_{p4} + CC_{p5})$$

$$CC_{p7} = \{(0.20 \times AFC)x \left(\frac{7}{12}\right) x \left(\frac{PAFMp7}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC)x \left(\frac{7}{12}\right)\} - (CC_{p1} + CC_{p2} + CC_{p3} + CC_{p4} + CC_{p5} + CC_{p6})$$

$$CC_{p8} = \{(0.20 \times AFC)x \left(\frac{2}{3}\right) x \left(\frac{PAFMp8}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC)x \left(\frac{2}{3}\right)\} - (CC_{p1} + CC_{p2} + CC_{p3} + CC_{p4} + CC_{p5} + CC_{p6} + CC_{p7})$$

$$CC_{p9} = \{(0.20 \times AFC)x \left(\frac{3}{4}\right) x \left(\frac{PAFMp9}{NAPAF}\right) \text{ subject to ceiling of } (0.20 \times AFC)x \left(\frac{3}{4}\right)\} - (CC_{p1} + CC_{p2} + CC_{p3} + CC_{p4} + CC_{p5} + CC_{p6} + CC_{p7} + CC_{p8})$$

$$CC_{op1} = \{(0.80 \times AFC)x \left(\frac{1}{12}\right) x \left(\frac{PAFMop1}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC)x \left(\frac{1}{12}\right)\}$$

$$CC_{op2} = \{(0.80 \times AFC)x \left(\frac{1}{6}\right) x \left(\frac{PAFMop2}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC)x \left(\frac{1}{6}\right)\} - CC_{op1}$$

$$CC_{op3} = \{(0.80 \times AFC)x \left(\frac{1}{4}\right) x \left(\frac{PAFMop3}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC)x \left(\frac{1}{4}\right)\} - (CC_{op1} + CC_{op2})$$

$$CC_{op4} = \{(0.80 \times AFC)x \left(\frac{1}{3}\right) x \left(\frac{PAFMop4}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC)x \left(\frac{1}{3}\right)\} - (CC_{op1} + CC_{op2} + CC_{op3})$$

$$CC_{op5} = \{(0.80 \times AFC)x \left(\frac{5}{12}\right) x \left(\frac{PAFMop5}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC)x \left(\frac{5}{12}\right)\} - (CC_{op1} + CC_{op2} + CC_{op3} + CC_{op4})$$

$$CC_{op6} = \{(0.80 \times AFC)x \left(\frac{1}{2}\right) x \left(\frac{PAFMop6}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC)x \left(\frac{1}{2}\right)\} - (CC_{op1} + CC_{op2} + CC_{op3} + CC_{op4} + CC_{op5})$$

$$CC_{op7} = \{(0.80 \times AFC)x \left(\frac{7}{12}\right) x \left(\frac{PAFMop7}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC)x \left(\frac{7}{12}\right)\} - (CC_{op1} + CC_{op2} + CC_{op3} + CC_{op4} + CC_{op5} + CC_{op6})$$

$$CC_{op8} = \{(0.80 \times AFC)x \left(\frac{2}{3}\right) x \left(\frac{PAFMop8}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC)x \left(\frac{2}{3}\right)\} - (CC_{op1} + CC_{op2} + CC_{op3} + CC_{op4} + CC_{op5} + CC_{op6} + CC_{op7})$$

$$CC_{op9} = \{(0.80 \times AFC)x \left(\frac{3}{4}\right) x \left(\frac{PAFMop9}{NAPAF}\right) \text{ subject to ceiling of } (0.80 \times AFC)x \left(\frac{3}{4}\right)\} - (CC_{op1} + CC_{op2} + CC_{op3} + CC_{op4} + CC_{op5} + CC_{op6} + CC_{op7} + CC_{op8})$$

Provided that in case of generating station or unit thereof under shutdown due to Renovation and Modernisation, the Generating Company shall be allowed to recover O&M expenses and interest on loan only,

Where,

$CC_m$  = Capacity Charge for the Month;

$CC_p$  = Capacity Charge for the Peak Hours of the Month;

$CC_{op}$  = Capacity Charge for the Off-Peak Hours of the Month;

$CC_{pn}$  = Capacity Charge for the Peak Hours of nth Month in a specific Season;

$CC_{opn}$  = Capacity Charge for the Off-Peak of nth Month in a specific Season;

AFC = Annual Fixed Cost;

$PAFM_{pn}$  = Plant Availability Factor achieved during Peak Hours upto the end of nth Month in a Season;

$PAFM_{opn}$  = Plant Availability Factor achieved during Off-Peak Hours upto the end of nth Month in a Season;

NAPAF = Normative Annual Plant Availability Factor.

- 50.3 Normative Plant Availability Factor for “Peak” and “Off-Peak” Hours in a month shall be equivalent to the NAPAF specified in Regulations 46.1 and 46.2 of these Regulations. The number of hours of “Peak” and “Off-Peak” periods during a day shall be four and twenty respectively. The hours of Peak and Off-Peak periods during a day shall be declared by the SLDC at least a week in advance. The High Demand Season (period of three months, consecutive or otherwise) and Low Demand Season (period of remaining nine months, consecutive or otherwise) in the State shall be declared by the SLDC, at least six months in advance:

Provided that the SLDC, after duly considering the comments of the concerned stakeholders, shall declare Peak Hours and High Demand Season in such a way as to coincide with the Peak Hours and High Demand Season of the State.

- 50.4 Any under-recovery or over-recovery of Capacity Charge as a result of under-achievement or over-achievement, vis-à-vis the NAPAF in Peak and Off-Peak Hours of a Season (High Demand Season or Low Demand Season, as the case may be) shall not be adjusted with under-achievement or over-achievement, vis-à-vis the NAPAF in Peak and Off-Peak Hours of the other Season:

Provided that within a Season, the shortfall in recovery of Capacity Charge for cumulative Off-Peak Hours derived based on NAPAF, shall be allowed to be off-set by

over-achievement of PAF, if any, and consequent notional over-recovery of Capacity Charge for cumulative Peak Hours in that Season:

Provided further that within a Season, the shortfall in recovery of Capacity Charge for cumulative Peak Hours derived based on NAPAF, shall not be allowed to be off-set by over-achievement of PAF, if any, and consequent notional over-recovery of Capacity Charge for cumulative Off-Peak Hours in that Season:

Provided also that full Capacity Charges shall be recoverable at target availability specified in Regulations 46.1 and 46.2, and recovery of Capacity Charges below the level of Target Availability shall be on pro-rata basis, irrespective of the reasons for the lower Availability, and no part of the Capacity Charges shall be recoverable except to the extent of Availability:

Provided that at zero availability, no Capacity Charges shall be payable.

## **B. Energy Charges**

50.5 The Energy Charges shall cover landed cost of primary fuel and secondary fuel oil and shall be worked out on the basis of total energy scheduled to be supplied to the Beneficiary/ies during the calendar month on ex-power plant basis, at the Energy Charge Rate of the month (with fuel price adjustment) as per the following formula:

Energy Charges (Rs) = (Energy Charge Rate in Rs/kWh) x [Scheduled Energy (ex-bus) for the month in kWh]

50.6 Energy Charge Rate (ECR) in Rs/kWh shall be computed up to three decimal places and shall be the sum of the cost of normative quantities of primary and secondary fuel for delivering ex-bus one kWh of electricity, and shall be computed as per the following formula:

$$\text{ECR} = \frac{[P_p \times (Q_p)_n + P_s \times (Q_s)_n]}{[1-(AUX)_n]} \quad (\text{Rs/kWh})$$

Where,  $P_p$  = landed cost of primary fuel, namely coal or lignite or gas or liquid fuel and limestone, if applicable, in Rs/kg or Rs/cum or Rs/litre, as the case may be;

$(Q_p)_n$  = Quantity of primary fuel required for generation of one kWh of electricity at generator terminals in kg or litre or standard cubic metre, as the case may be, and shall be computed on the basis of normative Gross Station Heat Rate (less heat contributed by

secondary fuel oil for coal/lignite based Generating Stations) and gross calorific value of coal/lignite or gas or liquid fuel as billed by supplier less:

- (a) Actual loss in calorific value of coal between “as billed by supplier” and “as received at generating station”, subject to the maximum loss in calorific value of 300 kcal/kg; and
- (b) actual stacking loss subject to the maximum stacking loss of 85 kcal/kg for pithead stations and 120 kcal/kg for non-pithead stations;

$P_s$  = landed cost of Secondary fuel oil in Rs./ml,

$(Q_s)_n$  = Normative Quantity of Secondary fuel oil in ml/kWh as per Regulations 46.11 and 46.12, and

$AUX_n$  = Normative Auxiliary Energy Consumption as % of gross generation as per Regulations 46.13 to 46.17:

Provided that the landed cost of primary fuel and secondary fuel for tariff determination shall be based on actual weighted average cost of primary fuel and secondary fuel of the three preceding months, and in the absence of landed costs for the three preceding months, latest procurement price of primary fuel and secondary fuel for the generating Station, preceding the first month for which the Tariff is to be determined for existing stations, and immediately preceding three months in case of new generating stations shall be taken into account:

Provided further that the landed cost of fuel shall mean the total cost of coal, lignite or the gas delivered to the generating station and shall include the base price of fuel corresponding to the grade/quality/calorific value of fuel inclusive of royalty, taxes and duties as applicable, washery charges as applicable, transportation cost by rail/road/gas pipe line or any other means, charges for third-party sampling, and, for the purpose of computation of energy charges, shall be arrived at after considering normative transit and handling losses as percentage of the quantity of fuel dispatched by the fuel supply company during the month as specified in Regulation 46.18:

Provided also that 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:

Provided also that any refund of taxes and duties along with any amount received on account of penalties from fuel supplier shall have to be adjusted in fuel cost:

Provided also that the Energy Charges, for the purpose of billing/Fuel Surcharge shall be worked out Station-wise/Unit-wise based on weighted average rate based on scheduled generation from each Unit.

**50.7 Adjustment of ECR [Fuel Surcharge Adjustment] on account of variation in price or heat value of fuels**

Any variation in Price and Gross Calorific Value of coal/lignite or gas or liquid fuel as billed by supplier less actual stacking loss subject to the maximum stacking loss of 85 kcal/kg or 120 kcal/kg, as the case may be, vis-a-vis approved values shall be adjusted on month to month basis on the basis of average Gross Calorific Value of coal/lignite or gas or liquid fuel in stock received and weighted average landed cost incurred by the Generating Company for procurement of coal/lignite, oil, or gas or liquid fuel, as the case may be for a power Station:

Provided that in its bills, the Generating Company shall indicate Energy Charge Rates at base price of primary and secondary fuel approved by the Commission and the Fuel Surcharge to it separately:

Provided further that the Generating Company shall provide to the Beneficiaries of the generating Station, the details of parameters of GCV and price of fuel for each type of fuel, i.e., domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel, etc., as per the forms prescribed by the Commission:

Provided also that 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 Company and beneficiary/ies 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 also that in such case, prior permission from beneficiaries shall not be a precondition, unless otherwise agreed specifically in the power purchase agreement:

Provided also that the weighted average price of alternative source of fuel shall not exceed 5% of base price of primary and secondary fuel approved by the Commission:

Provided also that where the Energy Charge Rate based on weighted average price of fuel upon use of alternative source of fuel supply exceeds 5% of base Energy Charge Rate as approved by the Commission for that year, prior consent with beneficiary/ies shall be obtained at least three days in advance:

Provided also that in case use of alternative source of fuel is not opted for, based on prior consultation with beneficiary/ies, then the Generating Company shall be entitled to

consider deemed Availability to the extent of reduced Availability on account of fuel non-availability, for the purpose of Availability computations for recovery of Annual Fixed Charges in accordance with Regulation 50.2:

Provided also 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 billed by supplier shall also be provided separately, along with the bills of the respective month:

Provided also that copies of the bills and 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., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed month-wise on the website of the Generating Company, and should be available on its website for a period of three months.

### **C. Incentive**

50.8 Incentive shall be payable at a flat rate of 50.0 paise/kWh for actual energy generation in excess of ex-bus energy corresponding to target Plant Load Factor during peak hours and at a flat rate of 25.0 paise/kWh for actual energy generation in excess of ex-bus energy corresponding to target Plant Load Factor during off-peak hours, on a cumulative basis within each Season (High Demand Season or Low Demand Season, as the case may be), as specified in Regulation 46.3 of these Regulations.

## **51 Computation and Payment of Capacity Charges, Energy Charges and Lease Rent for Hydro Generating Stations**

51.1 The Annual Fixed Charges of a Hydro Generating Station shall be computed on annual basis, based on norms specified under these Regulations, and recovered on monthly basis under Capacity Charge (inclusive of incentive) and Energy Charge, which shall be payable by the Beneficiaries in proportion to their respective share in the capacity of the Generating Station.

51.2 In addition to Annual Fixed Charges to be recovered through Capacity Charge and Energy Charge, the Lease Rent and Water Royalty shall be payable by the Beneficiaries in proportion to their respective share in the capacity of the Generating Station on monthly basis.

51.3 The Capacity Charge (inclusive of incentive) payable to a Hydro Generating Station for a calendar month shall be

$$\text{AFC} \times 0.5 \times \text{NDM} / \text{NDY} \times (\text{PAFM} / \text{NAPAF}) \text{ (in Rupees)}$$

Where,

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

NAPAF = Normative Annual Plant Availability Factor in percentage

NDM = Number of days in the month

NDY = Number of days in the year

PAFM = Plant availability factor achieved during the month, in Percentage

51.4 The PAFM shall be computed in accordance with the following formula:

$$PAFM = 100 \times \sum_{i=1}^N DC_i / \{ N \times IC \times (1 - AUX) \} \%$$

Where,

AUX = Normative auxiliary energy consumption in percentage

DC<sub>i</sub> = Declared capacity (in ex-bus MW) for the i<sup>th</sup> day of the month which the Station can deliver for at least three hours, as certified by the MSLDC after the day is over.

IC = Installed capacity (in MW) of the complete Generating Station

N = Number of days in the month

51.5 The Energy Charge shall be payable by every Beneficiary for the total energy scheduled to be supplied to the Beneficiary/ies, during the calendar month, on ex-bus basis, at the computed Energy Charge Rate. Total Energy Charge payable to the Generating Company for a month shall be:

$$\text{Energy Charges in Rs} = (\text{Energy Charge Rate in Rs. / kWh}) \times \{ \text{Scheduled Energy (ex-bus)} \} \text{ for the month in kWh}$$

51.6 Energy Charge Rate (ECR) in Rupees per kWh on ex-bus basis, for a Hydro Generating Station, shall be determined up to three decimal places based on the following formula:

$$ECR = AFC \times 0.5 / \{ DE \times (1 - AUX) \}$$

Where,

DE = Annual Design Energy specified for the Hydro Generating Station, in kWh, subject to Regulation 51.7.

51.7 In case the saleable scheduled energy (ex-bus) of a Hydro Generating Station during a year is less than the saleable Design Energy (ex-bus) for reasons beyond the control of

the Generating Company, the following treatment shall be applied on a rolling basis on a Petition filed by the Generating Company:

- (i) Shortfall in Energy Charges in comparison to fifty percent of the Annual Fixed Cost shall be allowed to be recovered in six equal monthly instalments:

Provided that in case actual generation from a hydel generating Station is less than the Design Energy for a continuous period of 4 years on account of hydrology factor, the generating Station shall approach the Central Electricity Authority with relevant hydrology data for revision of design energy of the Station.

- (ii) Any shortfall in the Energy Charges on account of saleable scheduled energy (ex-bus) being less than the saleable design energy (ex-bus) during the Control Period from 2016-17 to FY 2019-20, which was beyond the control of the generating station and which could not be recovered during the said Control Period shall be recovered in accordance with clause (i) of this Regulation.

51.8 In case the Energy Charge Rate (ECR) for a Hydro Generating Station, as computed in Regulation 51.6, exceeds ninety paise per kWh, and the actual saleable energy in a Year exceeds  $\{ DE \times ( 1 - AUX ) \}$  kWh, the Energy Charge for the energy in excess of the above shall be billed at one hundred and twenty (120) paise per kWh only.

51.9 The MSLDC shall finalise the schedules for the hydel Generating Stations, in consultation with the Beneficiaries, for optimal utilization of all the energy declared to be available, which shall be scheduled for all Beneficiaries in proportion to their respective allocations in the Generating Station.

## **52 Pumped Storage Hydro Generating Stations**

52.1 The mechanism for billing for existing pumped storage hydel stations shall be in accordance with the Power Purchase Agreement already approved by the Commission, and shall not be in accordance with this Regulation.

52.2 The fixed cost of pumped storage hydel generating stations achieving COD after April 1, 2020 shall be computed on annual basis, based on norms specified under these Regulations, and recovered on monthly basis as Capacity Charge.

52.3 The Capacity Charge shall be payable by the Beneficiaries in proportion to their respective allocation in the saleable capacity of the generating Station:

Provided that during the period between the date of commercial operation of the first Unit of the generating Station and the date of commercial operation of the generating Station, the annual fixed cost shall be worked out based on the latest estimate of the

completion cost for the generating Station, for the purpose of determining the Capacity Charge payment during such period.

52.4 The Capacity Charge payable to a pumped storage hydel generating Station for a calendar month shall be:

(AFC x NDM / NDY) (in Rupees), if actual Generation during the month is greater than or equal to 75 % of the Pumping Energy consumed by the Station during the month, and { (AFC x NDM / NDY) x (Actual Generation during the month during peak hours/ 75% of the Pumping Energy consumed by the Station during the month) (in Rupees)}, if actual Generation during the month is lower than 75 % of the Pumping Energy consumed by the Station during the month.

Where,

AFC = Annual fixed cost specified for the year, in Rupees;

NDM = Number of days in the month;

NDY = Number of days in the year:

Provided that there would be adjustment at the end of the year based on actual generation and actual pumping energy consumed by the Station during the year.

52.5 The energy charge shall be payable by every Beneficiary for the total energy scheduled to be supplied to the Beneficiary in excess of the design energy plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir, at a flat rate equal to the average Energy Charge Rate of 20 paise per kWh on ex power plant basis.

52.6 Energy charge payable to the Generating Company for a month shall be:

$= 0.20 \times \{ \text{Energy generated (ex-bus) for the month in kWh} - (\text{Design Energy for the month } (DE_m) + 75\% \text{ of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir for the month}) \}$ ,

Where,

$DE_m$  = Design energy for the month specified for the hydel generating Station, in kWh:

Provided that in case the energy generated in a month is less than the Design Energy for the month plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month, then the energy charges payable by the Beneficiaries shall be zero.

52.7 The Generating Company shall maintain the record of daily inflows of natural water into the upper elevation reservoir and the reservoir levels of upper elevation reservoir and lower elevation reservoir on hourly basis.

52.8 The generator shall be required to maximize the peak hour supplies with the available water including the natural flow of water:

Provided that in case it is established that the Generating Company is deliberately or otherwise without any valid reason, not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power to its potential or wasting natural flow of water, the Capacity Charges of the day shall not be payable by the Beneficiary/ies:

Provided further that for this purpose, outages of the Unit(s)/Station including planned outages and the forced outages up to 15% in a year shall be construed as the valid reason for not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power using energy of pumped water or natural flow of water:

Provided also that the total capacity charges recovered during the year shall be adjusted on pro-rata basis in the following manner in the event of total machine outages in a year exceeds 15% :

$$(ACC)_{adj} = (ACC)_R \times (1 - ATO)/85$$

Where,

$(ACC)_{adj}$  = Adjusted Annual Capacity Charges

$(ACC)_R$  = Annual Capacity Charges recovered

ATO = Total Outages in percentage for the year including forced and planned outages:

Provided also that the generating Station shall be required to declare its machine availability daily on day ahead basis for all the time blocks of the day in line with the scheduling procedure laid down under the State Grid Code.

### **53 Demonstration of declared capacity**

53.1 The Generating Company may be required to demonstrate the declared capacity of its Generating Station as and when asked by the MSLDC.

53.2 In the event of the Generating Company failing to demonstrate the declared capacity, the Annual Fixed Charges due to the Generating Company shall be reduced as a measure of penalty.

- 53.3 The quantum of penalty for the first mis-declaration for any duration/block in a day shall be the charges corresponding to two days fixed charges.
- 53.4 For the second mis-declaration, the penalty shall be equivalent to fixed charges for four days and for subsequent mis-declarations in the year, the penalty shall be multiplied in the geometrical progression.
- 53.5 The operating logbooks of the Generating Station shall be available for scrutiny by the MSLDC, and these books shall keep record of machine operation and maintenance.

#### **54 Billing and Payment of Charges**

The Billing and Payment of Annual Fixed Charges, Energy Charges, Fuel Surcharge Adjustments and Incentive for Thermal Generating Stations, and of Capacity Charges and Energy Charges for Hydro Generating Stations, shall be done on a monthly basis.

#### **55 Deviation Charges**

- 55.1 Variations between actual net injection and scheduled net injection for the generating stations, and variations between actual net drawal and scheduled net drawal for the Beneficiary/ies shall be treated as their respective deviations, and charges for such deviations shall be governed by the Maharashtra Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2019:

Provided that the Deviation Charges paid or earned by the Generating Company/ies in accordance with Regulation 9 of the Maharashtra Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2019 and Additional Charges for Deviation in accordance with Regulation 10 of the Maharashtra Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2019, shall not be recoverable/adjusted from the Beneficiary/ies through Tariff:

Provided further that the Deviation Charges paid or earned by the Distribution Licensees in accordance with Regulation 9 of the Maharashtra Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2019 shall be recoverable/adjusted from the Beneficiary/ies through Tariff:

Provided also that the Additional Charges for Deviation paid or earned by the Distribution Licensees in accordance with Regulation 10 of the Maharashtra Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2019, shall not be recoverable from the Beneficiary/ies through Tariff.

- 55.2 Actual net deviation of every Generating Station and Beneficiary shall be metered in accordance with Regulation 10 of the Maharashtra Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2019.

## **PART F: TRANSMISSION**

### **56 Applicability**

- 56.1 The Regulations contained in this Part shall apply to the determination of Tariff for access and use of the intra-State transmission system pursuant to a Bulk Power Transmission Agreement or other arrangement entered into with a Transmission System User:

Provided that in case a new transmission system set up by a new Transmission Licensee is added to the existing system during the Control Period, the Commission shall re-determine the Tariff for the remaining years of the Control Period having regard to the Petition for determination of Aggregate Revenue Requirement submitted by such Transmission Licensee for the remaining years of the Control Period.

- 56.2 The Commission shall be guided by the terms and conditions contained in this Part in specifying the rates, charges, terms and conditions for use of intervening transmission facilities pursuant to a Petition filed in this regard by a Transmission Licensee under the proviso to Section 36 (1) of the Act.

### **57 Components of Tariff**

- 57.1 The transmission charges for access to and use of the intra-State transmission system shall comprise any of the following components or a combination of the following components:

- (a) transmission system access charges;
- (b) annual transmission charges;
- (c) per unit charges for energy transmitted;
- (d) reactive energy charges.

- 57.2 Any person who is eligible to apply for access to the intra-State transmission system shall be entitled to obtain such access in accordance with the Regulations of the Commission governing Transmission Open Access and shall be liable to pay the charges for obtaining such access as specified in this Regulation.

**Explanation:** For the purpose of this Regulation, such person who, being eligible for transmission open access, has applied for allocation of transmission capacity rights and

has agreed to the carrying out of works for obtaining such access shall hereinafter be referred to as the “intending Transmission System User”, and may include an existing Transmission System User in respect of any increase in allocated transmission capacity rights applied for by such existing user.

57.3 Where the access of the intending Transmission System User to the intra-State transmission system entails works of transmission lines or other transmission assets dedicated to such User, the Transmission Licensee shall be entitled to recover, through the transmission system access charges, all expenses reasonably incurred on such works for providing access to such intending Transmission System User.

57.4 Where the access of the intending Transmission System User entails other works, not covered under Regulation 57.3 relating to the intra-State transmission system, the Transmission Licensee shall recover the expenses relating to such works through annual transmission charges for each Year of the Control Period, in accordance with Regulation 57.10.

57.5 Where any works for obtaining access have been carried out by the intending Transmission System User, the Transmission Licensee shall be entitled to recover supervision charges at the rate of 15 per cent of the cost of labour employed for carrying out such works and shall not be entitled to recover any other expenses with regard to such works:

Provided that such supervision charges shall form part of the Non-Tariff Income of the respective Transmission Licensee and shall also be treated as O&M expense incurred by the intending transmission system users, which shall be capitalised in the respective year of asset capitalisation.

57.6 The works for providing access to the intra-State transmission system shall be maintained by the Transmission Licensee for the duration of the Bulk Power Transmission Agreement between the Transmission Licensee and the Transmission System User.

57.7 Where the Transmission System User has paid for the works carried out to provide it access to the intra-State transmission system, the Transmission System User shall be entitled to the depreciated value of such works paid for by it upon termination of the Bulk Power Transmission Agreement:

Provided that where the Transmission System User has carried out the works to provide it access to the intra-State transmission system of the Transmission Licensee, the Transmission System User shall be entitled to retain such works upon termination of the Bulk Power Transmission Agreement.

57.8 The transmission system access charges may be recovered by any one of the following methods, in accordance with the terms of the Bulk Power Transmission Agreement:

- (a) As a one-time payment by the Transmission System User at the time of obtaining access; or
- (b) As a series of payments over the duration of the Bulk Power Transmission Agreement; or
- (c) As any combination of (a) and (b) above.

57.9 Any dispute between the Transmission Licensee and the intending Transmission System User with regard to the works to be carried out to give access to the intending Transmission System User or with regard to the transmission system access charges shall be referred to the Commission for adjudication or to such other forum as may be stipulated.

57.10 The Annual Transmission Charges for each Year of the Control Period shall provide for the recovery of the Aggregate Revenue Requirement of the Transmission Licensee for the respective Year of the Control Period, as approved by the Commission and comprising the following components:

- (a) Operation and Maintenance expenses;
- (b) Depreciation;
- (c) Interest on Loan Capital;
- (d) Interest on working capital and deposits from Transmission System Users;
- (e) Contribution to contingency reserves;
- (f) Return on Equity Capital;
- (g) Income Tax;

**minus:**

- (h) Income from Open Access charges;
- (i) Non-Tariff income;
- (j) Income from Other Business, to the extent specified in these Regulations:

Provided that Depreciation, Interest on Loan Capital, Interest on working capital and deposits from Transmission System Users, Contribution to Contingency Reserves, Return on Equity, and Income Tax for Transmission Licensees shall be allowed in accordance with the provisions specified in **Part D** of these Regulations:

Provided further that the components of the Aggregate Revenue Requirement corresponding to the transmission lines owned by Maharashtra State Electricity Transmission Company Limited (MSETCL) and conveying electricity to other States, being recovered through the Point of Connection (PoC) transmission charges in accordance with the Regulations and Orders of the Central Electricity Regulatory Commission, shall not be recovered from the Annual Transmission Charges determined under these Regulations:

Provided also that in case any such components have already been recovered through the intra-State transmission tariff, then such excess recovery shall be deducted from the Aggregate Revenue Requirement of MSETCL for the future years, along with associated holding cost, as applicable:

Provided also that prior period income/expenses shall be allowed by the Commission at the time of truing up based on audited accounts, on a case to case basis, if the income/expenses in that prior period have been allowed on actual basis, subject to prudence check:

Provided also that all penalties and compensation payable by the Licensee to any party for failure to meet any Standards of Performance or for damages, as a consequence of the orders of the Commission, Courts, etc., shall not be allowed to be recovered through the Aggregate Revenue Requirement:

Provided also that the Transmission Licensee shall maintain separate details of such penalties and compensation paid or payable by the Licensee, if any, and shall submit them to the Commission along with its Petition.

- 57.11 The Annual Transmission Charges of the Transmission Licensee shall be determined by the Commission on the basis of a Petition for determination of Aggregate Revenue Requirement, filed by the Transmission Licensee in accordance with **Part B** of these Regulations, or Petition for adoption of Annual Transmission Charges in case of competitively awarded transmission system Project, as the case may be.

## **58 Petition for determination of Provisional Tariff**

- 58.1 A new Transmission Licensee shall file the Petition for determination of provisional Tariff, six months prior to the anticipated date of commercial operation of the transmission assets.
- 58.2 The new Transmission Licensee shall file a Petition for determination of provisional Tariff based on capital expenditure incurred and projected to be incurred up to the date

of commercial operation and additional capital expenditure incurred, duly certified by the statutory auditors:

Provided that the Petition shall contain details of underlying assumptions for the projected capital cost and additional capital cost, wherever applicable.

- 58.3 The new Transmission Licensee may be allowed provisional Tariff by the Commission from the anticipated date of commercial operation, based on the projected capital expenditure, subject to prudence check.
- 58.4 If the date of commercial operation is likely to be delayed beyond six months from the date of issue of the order approving the provisional Tariff, the Transmission Licensee may submit a Petition for seeking extension of the validity of the applicability of the provisional Tariff, giving details of the present status of completion and justification for the delay in project completion, which may be considered by the Commission after necessary prudence check.
- 58.5 The new Transmission Licensee shall file the Petition for determination of final Tariff within six months from the date of commercial operation, based on the audited capital expenditure and capitalisation as on the date of commercial operation.
- 58.6 The final Tariff determination for the new Transmission Licensee shall be done by the Commission based on prudence check of the audited capital expenditure and capitalisation as on the date of commercial operation.
- 58.7 Where the actual Capital Cost incurred on year to year basis is less than the Capital Cost approved for determination of provisional Tariff by the Commission, by five percent or more, the Transmission Licensee shall refund to the Beneficiaries, the excess Tariff realised corresponding to excess Capital Cost, along with interest at the Base Rate, as prevalent on the first day of April of the respective Year, plus 150 basis points.
- 58.8 Where the actual Capital Cost incurred on year to year basis is more than the Capital Cost approved for determination of provisional Tariff by the Commission, by five percent or more, the Transmission Licensee shall, subject to the approval of the Commission, recover from the Beneficiaries the shortfall in Tariff corresponding to such decrease in Capital Cost along with interest at the Base Rate, as prevalent on the first day of April of the respective Year, plus 150 basis points.

## **59 Capital Investment Plan**

- 59.1 The Transmission Licensee shall submit a detailed capital investment plan, financing plan and physical targets for each year of the Control Period for strengthening and augmentation of the intra-State transmission system of the Transmission Licensee,

meeting the requirement of load growth, improvement in quality of supply, reliability, metering, reduction in congestion, etc., to the Commission for approval, as a part of the Multi-year Aggregate Revenue Requirement for the entire Control Period.

- 59.2 The Capital Investment Plan shall be a least cost plan for undertaking investments and shall cover all capital expenditure projects of a value exceeding Rs. Ten crore or such other amount as may be stipulated by the Commission from time to time, and shall be in such form as may be stipulated.
- 59.3 The Capital Investment Plan shall be accompanied by such information, particulars and documents as may be required including but not limited to the information such as number of bays, name, configuration and location of grid substations, substation capacity (MVA), transmission line length (circuit kilometres) showing the need for the proposed investments, alternatives considered, cost-benefit analysis and other aspects that may have a bearing on the transmission charges.
- 59.4 The Capital Investment Plan of the Transmission Licensee shall be consistent with the transmission system plan for the intra-State transmission system developed by the State Transmission Utility bearing in mind the transmission system plan for the inter-State transmission system developed by the Central Transmission Utility:
- Provided that any capital expenditure incurred by the Transmission Licensee based on the specific requirement of a Generating Company or Distribution Licensee shall be substantiated with necessary documentary evidence in the form of request for the same and undertaking given as appropriate.
- 59.5 The Commission shall consider the Capital Investment Plan along with the Multi-year Aggregate Revenue Requirement for the entire Control Period submitted by the Transmission Licensee taking into consideration the prudence of the proposed expenditure and estimated impact on transmission charges.
- 59.6 The Transmission Licensee shall submit, along with the Petition for determination of Aggregate Revenue Requirement or along with the Petition for Mid-term Performance Review, as the case may be, details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require to assess such progress.

## **60 Operational Norms**

60.1 Target availability for the Transmission Licensee shall be as under:

(a) For full recovery of Annual Transmission Charges:

(i) AC system : 98 per cent

- (ii) HVDC bi-pole links and HVDC back-to-back stations : 95 per cent
- (b) For Additional Rate of Return on Equity consideration:
  - (i) AC system : 99 per cent;
  - (ii) HVDC bi-pole links and HVDC back-to-back stations : 96 per cent;

**Note 1:**

Recovery of annual transmission charges below the level of target availability shall be on pro-rata basis, and at zero availability, no transmission charges shall be payable.

**Note 2:**

The target availability shall be computed in accordance with procedure provided in the **Annexure-II** to these Regulations and be certified by MSLDC:

Provided that for AC system, two trippings per element per year shall be allowed, and after two trippings in a year, additional 12 hours outage for that particular element for each such tripping shall be considered in addition to the actual outage:

Provided further that in case of outage of a transmission element affecting evacuation of power from a generating Station, outage hours shall be multiplied by a factor of 2:

Provided also that the computation of additional rate of Return on Equity shall be undertaken as per Regulation 29.

## **61 Operation and Maintenance expenses**

61.1 The norms for O&M expenses for existing and new Transmission Licensees have been specified on the basis of circuit kilometre of transmission lines and number of Bays in the substation of the Transmission Licensee, as given below:

**Explanation:** For the purpose of applying normative O&M expenses under these Regulations, a ‘Bay’ shall mean a set of accessories that are required to connect an electrical equipment such as Transmission Line, Bus Section Breakers, Potential Transformers, Power Transformers, Capacitors and Transfer Breaker and the feeders emanating from the bus at sub-Station of Transmission Licensee. Further, the Bays referred to shall include only the Bays at the Transmission substation and shall exclude any Bays of the Generating Station switchyard whose maintenance is usually the responsibility of the Generating Company:

Provided that for computing the allowable O&M expenses for any Year, 50 per cent of the circuit kilometre of transmission lines and number of Bays in the substation of the Transmission Licensee added during the Year shall also be considered:

Provided further that at the time of Truing up along with the Mid-term Review or at the end of the Control Period, the allowable O&M expenses for any Year shall be based on the norms for O&M expenses specified by the Commission in this Regulation and documentary evidence of assets capitalised by the Petitioner, subject to the prudence check of the Commission:

Provided also that the number of Bays considered for allowing O&M expenses shall exclude the unutilised Bays.

61.2 The norms for O&M expenses for the Maharashtra State Electricity Transmission Company Limited shall be:

<b>Voltage Level</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>FY 2024-25</b>
HVDC (Rs Lakh)	2,146	2,221	2,299	2,380	2,464
<b>Rs Lakh/ckt km</b>					
765 kV	0.86	0.89	0.93	0.96	1.00
400 kV	0.61	0.63	0.66	0.68	0.71
>66 kV & <400 kV	0.24	0.25	0.26	0.27	0.28
66 kV and less	0.15	0.15	0.16	0.16	0.17
<b>Rs Lakh/Bay</b>					
765 kV	156.40	162.42	168.67	175.17	181.91
400 kV	111.73	116.03	120.49	125.13	129.95
>66kV & <400 kV	16.19	16.81	17.46	18.13	18.83
66 kV and less	3.38	3.51	3.65	3.79	3.94

61.3 The norms for O&M expenses for The Tata Power Company Ltd. - Transmission (TPC-T) shall be:

<b>Voltage Level</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>FY 2024-25</b>
<b>Rs Lakh/ckt km</b>					
>66kV & <400 kV	1.24	1.29	1.33	1.39	1.44
<b>Rs Lakh/Bay</b>					
>66kV & <400 kV	32.38	33.63	34.92	36.26	37.66
66 kV and less	6.77	7.03	7.30	7.58	7.87

61.4 The norms for O&M expenses for Adani Electricity Mumbai Ltd. - Transmission (AEML-T) shall be:

<b>Voltage Level</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>FY 2024-25</b>
<b>Rs Lakh/ckt km</b>					

Voltage Level	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
>66 kV & <400 kV	0.71	0.74	0.76	0.79	0.82
<b>Rs Lakh/Bay</b>					
>66 kV & <400 kV	33.28	34.56	35.89	37.27	38.70
66kV and less	6.96	7.22	7.50	7.79	8.09

61.5 The norms for O&M expenses for Jaigad Power Transmission Company Limited (JPTL) shall be:

Voltage Level	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
<b>Rs Lakh/ckt km</b>					
400 kV	0.44	0.45	0.47	0.49	0.51
<b>Rs Lakh/bay</b>					
400 kV	77.04	80.01	83.09	86.29	89.61

61.6 The norms for O&M expenses for New Transmission Licensees, Other Existing Transmission Licensees, and additional voltages for TPC-T and AEML-T shall be:

Voltage Level	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
HVDC (Rs Lakh)	2,146	2,221	2,299	2,380	2,464
<b>Rs Lakh/ckt km</b>					
765 kV	1.46	1.51	1.57	1.63	1.69
400 kV	0.84	0.88	0.91	0.94	0.98
>66 kV & <400 kV	0.22	0.23	0.24	0.25	0.25
66 kV and less	0.15	0.15	0.16	0.16	0.17
<b>Rs Lakh/Bay</b>					
765 kV	156.40	162.42	168.67	175.17	181.91
400 kV	143.25	148.77	154.49	160.44	166.62
>66kV & <400 kV	14.07	14.62	15.18	15.76	16.37
66 kV and less	3.38	3.51	3.65	3.79	3.94

**Explanation:** The term "New Transmission Licensee" shall mean the transmission Licensee(s) for which Transmission Licence is granted by the Commission prior to or after the date of coming into effect of these Regulations, and for whom the O&M norms have not been specified in Regulations 61.2 to 61.5.

61.7 The O&M expenses for the GIS bays shall be allowed as worked out by multiplying 0.70 to the normative O&M expenses for bays as allowed in Regulation 61.2 to 61.6.

61.8 A Transmission Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:

Provided that the Transmission Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.

## **62 Non-Tariff Income**

62.1 The amount of non-Tariff income relating to the Transmission Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the Annual Transmission Charges of the Transmission Licensee:

Provided that the Transmission Licensee shall submit full details of its forecast of non-Tariff income to the Commission in such form as may be stipulated by the Commission.

62.2 The Non-Tariff Income shall include:

- a) Income from rent of land or buildings;
- b) Income from sale of scrap;
- c) Income from investments;
- d) Interest income on advances to suppliers/contractors;
- e) Income from rental from staff quarters;
- f) Income from rental from contractors;
- g) Income from hire charges from contractors and others;
- h) Supervision charges for capital works;
- i) Income from advertisements;
- j) Income from sale of tender documents;
- k) Any other Non-Tariff Income:

Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated Business of the Transmission Licensee shall not be included in Non-Tariff Income.

## **63 Income from Other Business**

Where the Transmission Licensee has engaged in any Other Business under Section 41 of the

Act for optimum utilisation of its assets, an amount equal to two-thirds of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the Aggregate Revenue Requirement in calculating the Annual Transmission Charges of the Transmission Licensee:

Provided that the Transmission Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Transmission Business and the Other Business and shall submit the Allocation Statement, duly certified by the Statutory Auditor, to the Commission along with its Petition for determination of Aggregate Revenue Requirement:

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

#### **64 Determination of Intra-State Transmission Tariff**

64.1 The aggregate of the yearly revenue requirement for all Transmission Licensees shall form the "Total Transmission System Cost" (TTSC) of the Intra-State transmission system, to be recovered from the Transmission System Users (TSUs) for the respective year of the Control Period, in accordance with the following Formula:

$$TTSC_{(t)} = \sum_{i=1}^n ARR_i$$

Where,

$TTSC_{(t)}$  = Pooled Total Transmission System Cost of year (t) of the Control Period;

n = Number of Transmission Licensee(s);

$ARR_i$  = Yearly revenue requirement approved by the Commission for  $i^{th}$  Transmission Licensee for the yearly period (t) of the Control Period:

Provided that in case of transmission system projects undertaken in accordance with the Guidelines for competitive bidding for transmission under Section 63 of the Act, the Aggregate Revenue Requirement as per the annual Transmission Service Charges (TSC) quoted for such projects, shall be considered, for aggregation under the TTSC.

64.2 The Commission shall approve yearly 'Base Transmission Capacity Rights' as average of Coincident Peak Demand and Non-Coincident Peak Demand for TSUs as projected for 12 monthly period of each year (t) of the Control Period, representing the 'Capacity

Utilisation' of Intra-State transmission system and accordingly determine yearly 'Base Transmission Tariff', in accordance with the following formula:

$$\begin{aligned} &\text{Base Transmission Capacity} \\ &\text{Rights (Base TCR) for the} \\ &\text{yearly period (t)} \end{aligned} = \sum_{u=1}^n ([\text{CPD}(t) + \text{NCPD}(t)]/2)$$

Where,

$\text{CPD}_{(t)}$  = Average of projected monthly Coincident Peak Demand for the yearly period (t) of Control Period for each Transmission System User (u)

$\text{NCPD}_{(t)}$  = Average of projected monthly Non-Coincident Peak Demand for the Yearly period (t) of Control Period for each Transmission System User (u):

Provided that for the first year of the Control Period, the Base Transmission Capacity Rights for all Transmission System Users shall be determined based on average monthly CPD and NCPD of the Transmission System Users prevalent during the 12 months prior to date of coming into effect of these Regulations or 12 months prior to filing of the Petition by the Transmission Licensees, depending on availability of such data:

Provided further that the Allotted Capacity for long-term Open Access Users excluding partial Open Access Users shall be considered in lieu of the average monthly CPD and NCPD for calculating the Base Transmission Capacity Rights:

Provided also that in case of a Deemed Distribution Licensee whose monthly CPD and NCPD data is not available for 12 months at the time of determination of Base TCR, the monthly CPD and NCPD data if available for at least 4 months, or the quantum of Short-term/Medium-Term Open Access applied for by the Deemed Distribution Licensee for the available period, shall be considered in lieu of the average monthly CPD and NCPD for calculating the Base Transmission Capacity Rights:

Provided also that the Yearly CPD and NCPD or the Allotted capacity, as the case may be, to be considered for determination of the subsequent yearly Base Transmission Capacity Rights shall be computed at the beginning of the Control Period based on the past trend and on the basis of demand projections made by various TSUs connected to the Intra-State transmission system as part of their MYT Petitions for the Control Period:

Provided also that on completion of each year of the Control Period, MSLDC shall submit the recorded CPD and NCPD data or the Allotted capacity, as the case may be, for past 12 months in respect of each Transmission System User and on the basis of the same, the Base TCR shall be suitably revised at the time of Mid-Term Review and at the end of the Control Period for the subsequent years.

64.3 Base Transmission Tariff for each Year shall be determined as ratio of approved ‘TTSC’ for intra-State transmission system and approved ‘Base Transmission Capacity Rights’ and shall be denominated in terms of “Rs/kW/month” (for long-term/medium-term usage) or in terms of “Rs/kWh” (for short-term bilateral open access transactions usage, short-term collective transactions over Power Exchange and for Renewable Energy transactions) in accordance with the following formula:

$$\begin{aligned} &\text{Base Transmission Tariff}_{(t)} \\ &\text{(long-term/medium-term)} \\ &\text{(Rs/kW/month or Rs/MW/day)} \end{aligned} = \text{TTSC}_{(t)} / \text{Base TCR}_{(t)}$$

$$\begin{aligned} &\text{Base Transmission} \\ &\text{Tariff}_{(t)} \text{ (Short-term)} \\ &\text{(Rs/kWh)} \end{aligned} = \frac{\text{TTSC}_{(t)}}{\sum_{i=1}^n \text{(Energy Transmitted by Tx } i)}$$

Where,

TTSC<sub>(t)</sub> = Pooled cost for InSTS for yearly period (t) of the Control Period;

Base TCR<sub>(t)</sub> = Base Transmission Capacity Rights for the yearly period (t);

n = Total number of Transmission Licensee(s) in that particular year of Control Period;

Tx<sub>i</sub> = i<sup>th</sup> Transmission Licensee:

Provided that the energy units transmitted by the Transmission Licensees shall be based on the energy input requirement of the Distribution Licensees at Generation-InSTS interface point, as projected by each Distribution Licensee as part of its MYT Petition for the Control Period and as approved by the Commission:

Provided further that any revisions in Base Transmission Capacity Rights and Base Transmission Tariff as determined in Regulations 64.2 and 64.3 due to the variation in the actual and approved CPD and NCPD shall be made at the time of Mid-Term Review and at the end of the Control Period for the subsequent years:

Provided also that in case new Transmission Licensees are added to the intra-State transmission network during the Control Period, then the TTSC, Base Transmission Capacity Rights and Base Transmission Tariff as referred under Regulations 64.1, 64.2 and 64.3 shall be re-determined for each remaining Year of the Control Period.

64.4 The Base Transmission Tariff shall continue to be billed at the Tariff approved by the Commission and applicable as on March 31, 2020 for the period starting from April 1,

2020 till approval of Base Transmission Tariff by the Commission in accordance with these Regulations.

- 64.5 The State Transmission Utility shall file the Petition for determination of Intra-State Transmission Tariff for the MYT Control Period latest by November 30, 2019, and latest by November 30, 2022 at the time of Mid-term Review for modification of intra-State transmission tariff for the fourth and fifth year of the Control Period, on the basis of Base Transmission Capacity Rights of each TSU, and the summation of the Aggregate Revenue Requirement projected by the Transmission Licensees for each Year of the Control Period:

Provided that the State Transmission Utility shall file the Petition for true-up of share of intra-State transmission tariff for FY 2020-21 and FY 2021-22 along with the Petition for Mid-term Review, on the basis of the actual CPD and NCPD of Transmission System Users in the respective years, or the quantum of Short-term/Medium-Term Open Access applied for by the Deemed Distribution Licensee for the available period, as applicable:

Provided further that in case of a Deemed Distribution Licensee whose monthly CPD and NCPD data is not available for 12 months at the time of determination of Base TCR, the monthly CPD and NCPD data if available for at least 4 months, or the quantum of Short-term/Medium-Term Open Access applied for by the Deemed Distribution Licensee for the available period, shall be considered in lieu of the average monthly CPD and NCPD for calculating the Base Transmission Capacity Rights.

## **65 Sharing of TTSC by long-term TSUs**

- 65.1 The long-term Transmission System Users shall share the TTSC of the intra-State transmission system in the proportion of Base Transmission Capacity Rights of each Transmission System User to the total Base Transmission Capacity Rights allotted in the intra-State transmission system.
- 65.2 The Annual Transmission Charge payable by Transmission System User shall be computed in accordance with the following formula:

$$ATC(u)_{(t)} = TTSC_{(t)} \times ([Base\ TCR(u)]_{(t)} / \sum_{u=1}^n [Base\ TCR(u)]_{(t)})$$

Where,

$$ATC(u)_{(t)} = \text{Annual Transmission Charges to be shared by Transmission System User (u) for the yearly period (t);}$$

$$Base\ TCR(u) = [CPD(u)_{(t)} + NCPD(u)_{(t)}] / 2$$

Where,

Base TCR represents the Base Transmission Capacity Right of each Transmission System User (u) for the yearly period (t);

CPD (u)<sub>(t)</sub> = Average Coincident Peak Demand of the Transmission System User (u) for the yearly period (t);

NCPD (u)(t) = Average Non-coincident Peak Demand of the Transmission System User (u) for the yearly period (t):

Provided that the Allotted Capacity for long-term Open Access Users, excluding partial Open Access Users shall be considered in lieu of the average monthly CPD and NCPD for calculating the Base TCR for such Open Access Users:

Provided further that in case of a Deemed Distribution Licensee whose monthly CPD and NCPD data is not available for 12 months at the time of determination of Base TCR, the monthly CPD and NCPD data if available for at least 4 months, or the quantum of Short-term/Medium-Term Open Access applied for by the Deemed Distribution Licensee for the available period, shall be considered in lieu of the average monthly CPD and NCPD for calculating the Base Transmission Capacity Rights.

## **66 Usage of Intra-State Transmission System**

The charges for intra-State transmission usage shall be shared among various TSUs in the following manner:

- a) Long-term TSU with recorded demand up to Base TCR shall not be subjected to payment of short-term transmission charges.
- b) Long-term TSU with recorded demand greater than Base TCR but lower than Contracted Capacity shall make payment of short-term Transmission charges for the recorded demand in excess of Base TCR.
- c) Where the recorded demand of long-term TSU is greater than Contracted Capacity, the TSU shall bear additional transmission charges as specified in the Regulations of the Commission governing Transmission Open Access:

Provided that short-term transmission charges and additional transmission charges, if payable or paid by long-term TSUs in accordance with the clauses (a), (b) and (c) above, shall be adjusted during subsequent billing period upon availability of information regarding actual recorded demand by such long-term TSUs.

## **67 Transmission Pricing Framework**

The Commission may, after conducting a detailed study and due regulatory process, change the existing transmission pricing framework to one considering factors such as voltage, distance, direction and quantum of flow based on the methodology specified by the Central Electricity Regulatory Commission, as the Commission may deem appropriate.

## **68 Billing and Payment of Charges**

- 68.1 The State Transmission Utility (STU) shall raise monthly bill for Intra-State Transmission Charges on every Transmission System User (TSU) on the first working day of the month for the Transmission Charges of preceding month.
- 68.2 The monthly bill for transmission Tariff shall be payable within thirty days of date of bill by the STU.
- 68.3 All TSUs shall ensure timely payment of Transmission Tariff to STU so as to enable STU to make timely settlement of claims raised by Transmission Licensees.

## **69 Transmission Losses**

The energy losses in the intra-State transmission system, as determined by the State Load Despatch Centre and approved by the Commission, shall be considered as Transmission Losses and borne by the Transmission System Users in proportion to their usage of the intra-State transmission system:

Provided that the quantum of energy consumed by the auxiliary equipment of a transmission sub-station and the station transformer losses within the sub-station shall not be accounted for under the Transmission Losses:

Provided further that the energy consumed for supply of power by the transmission sub-station to the associated offices of the Licensee, its housing colony and other facilities, and for construction works at the sub-station, shall not be considered as energy consumed by the auxiliary equipment of a transmission sub-station.

## **70 Reactive Energy Charges**

- 70.1 A Generating Station shall inject/absorb the reactive energy in to the grid on the basis of machine capability as per the directions of MSLDC.
- 70.2 Reactive energy exchange, only if made as per the directions of MSLDC, for the applicable duration (injection or absorption) shall be compensated/levied by the MSLDC

to the Generating Station, as specified in the applicable Maharashtra Electricity Regulatory Commission (State Grid Code) Regulations, 2006.

70.3 The Transmission System Users shall be subjected to Incentive/Disincentive to be compensated/levied by the MSLDC for maintaining the reactive energy balance in the transmission system, as specified in the applicable Maharashtra Electricity Regulatory Commission (State Grid Code) Regulations, 2006.

## **PART G: DISTRIBUTION WIRES BUSINESS**

### **71 Separation of Accounts of Distribution Licensee**

Every Distribution Licensee shall maintain separate accounting records for the Distribution Wires Business and Retail Supply Business and shall prepare an Allocation Statement to enable the Commission to determine the Tariff separately for:

- (a) Distribution Wires Business;
- (b) Retail Supply of electricity:

Provided that in case complete accounting segregation has not been done between the Distribution Wires Business and Retail Supply Business of the Distribution Licensee, the Aggregate Revenue Requirement of the Distribution Licensee shall be apportioned between the Distribution Wires Business and Retail Supply Business in accordance with the following Allocation Matrix:

<b>Particulars</b>	<b>Distribution Wires Business (%)</b>	<b>Retail Supply Business (%)</b>
Power Purchase Expenses	0%	100%
Inter-State Transmission Charges	0%	100%
Intra-State Transmission Charges	0%	100%
Operation & Maintenance Expenses	65%	35%
Depreciation	90%	10%
Interest on Long-term Loan Capital	90%	10%
Interest on Working Capital	10%	90%
Interest on Consumer Security Deposits	10%	90%
Provision for Bad & Doubtful Debts	10%	90%
Income Tax	90%	10%
Contribution to Contingency Reserves	90%	10%
Return on Equity	90%	10%

<b>Particulars</b>	<b>Distribution Wires Business (%)</b>	<b>Retail Supply Business (%)</b>
Non-Tariff Income	10%	90%

Provided further that the above Allocation Matrix shall be applied for all or any of the heads of expenditure and revenue, where actual accounting separation has not been done between the Distribution Wires Business and Retail Supply Business:

Provided also that the Commission may require the Distribution Licensee to file separate Petitions for determination of Tariff for the Distribution Wires Business and Retail Supply Business.

## **72 Applicability**

The Regulations contained in this Part shall apply to the determination of Wheeling Charges payable for usage of distribution wires of a Distribution Licensee by a Distribution System User.

## **73 Components of Aggregate Revenue Requirement for Distribution Wires Business**

73.1 The Wheeling Charges of the Distribution Licensee shall provide for the recovery of the Aggregate Revenue Requirement of the Distribution Wires Business for the respective Years of the Control Period, as approved by the Commission and comprising the following components:

- (a) Operation and maintenance expenses;
- (b) Depreciation;
- (c) Interest on Loan Capital;
- (d) Interest on working capital;
- (e) Interest on deposits from consumers and Distribution System Users;
- (f) Provision for Bad and doubtful debts;
- (g) Contribution to contingency reserves;
- (h) Return on Equity Capital;
- (i) Income Tax;

**minus:**

- (j) Non-Tariff income;
- (k) Income from Other Business, to the extent specified in these Regulations:

Provided that Depreciation, Interest on Loan Capital, Interest on working capital, Interest on deposits from consumers and Distribution System Users, Contribution to Contingency Reserves, Return on Equity, and Income Tax for Distribution Wires Business shall be allowed in accordance with the provisions specified in **Part D** of these Regulations:

Provided further that prior period income/expenses shall be allowed by the Commission at the time of truing up based on audited accounts, on a case to case basis, if the income/expenses in that prior period have been allowed on actual basis, subject to prudence check:

Provided also that all penalties and compensation payable by the Licensee to any party for failure to meet any Standards of Performance or for damages, as a consequence of the orders of the Commission, Courts, Consumer Grievance Redressal Forum, and Ombudsman, etc., shall not be allowed to be recovered through the Aggregate Revenue Requirement:

Provided also that the Distribution Licensee shall maintain separate details of such penalties and compensation paid or payable by the Licensee, if any, and shall submit them to the Commission along with its Petition.

- 73.2 The Wheeling Charges of the Distribution Licensee shall be determined by the Commission on the basis of a Petition for determination of Tariff filed by the Distribution Licensee in accordance with **Part B** of these Regulations:

Provided that the Wheeling Charges may be denominated in terms of Rupees/kWh or Rupees/kVAh or Rupees/kW/month or Rupees/kVA/month, for the purpose of recovery from the Distribution System User, or any such denomination, as may be stipulated by the Commission:

Provided further that the Wheeling Charges shall be determined separately for LT voltage, HT voltage, and EHT voltage, as applicable:

Provided also that in case of a Deemed Distribution Licensee whose tariff is yet to be determined by the Commission till the date of coming into of these Regulations, the Commission may determine the ceiling Wheeling Charges that may be charged by such Deemed Distribution Licensee till such time as considered appropriate by the Commission.

- 73.3 The Wheeling Charges shall continue to be billed at the Tariff approved by the Commission and applicable as on March 31, 2020 for the period starting from April 1, 2020 till approval of Wheeling Charges by the Commission in accordance with these Regulations.

## **74 Capital Investment Plan**

74.1 The Distribution Licensee shall submit a detailed Capital Investment Plan, financing plan and physical targets for each Year of the Control Period for strengthening and augmentation of its distribution network, meeting the requirement of load growth, reduction in distribution losses, improvement in quality of supply, reliability, metering, reduction in congestion, etc., to the Commission for approval, as a part of the Multi-Year Tariff Petition for the entire Control Period.

74.2 The Capital Investment Plan shall be a least cost plan for undertaking investments and shall cover all capital expenditure projects of a value exceeding Rs. Ten Crore or such other amount as may be stipulated by the Commission from time to time and shall be in such form as may be stipulated by the Commission from time to time:

Provided that the limit shall be Rs. One crore for Deemed Distribution Licensees.

74.3 The Capital Investment Plan shall be accompanied by such information, particulars and documents as may be required including but not limited to the information such as number of distribution sub-stations, consumer sub-stations, transformation capacity in MVA and details of distribution transformers of different capacities, HT:LT ratio as well as distribution line length showing the need for the proposed investments, alternatives considered, cost-benefit analysis and other aspects that may have a bearing on the Wheeling Charges:

Provided that the Distribution Licensee shall submit separate details of Capital Investment being undertaken in each Distribution Franchisee area within its Licence area.

74.4 The Commission shall consider the Capital Investment Plan along with the Multi-Year Aggregate Revenue Requirement for the entire Control Period submitted by the Distribution Licensee taking into consideration the prudence of the proposed expenditure and estimated impact on Wheeling Charges.

74.5 The Distribution Licensee shall submit, along with the Petition for determination of Wheeling Charges, or along with the Petition for Mid-term Performance Review, as the case may be, details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require to assess such progress.

## **75 Operation and Maintenance Expenses**

75.1 The Distribution Licensees shall be permitted to recover Operation and Maintenance

expenses relating to the Distribution Wires Business in accordance with this Regulation.

- 75.2 The Operation and Maintenance expenses shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/deducting the share of efficiency gains/losses, for the three Years ending March 31, 2019, excluding abnormal Operation and Maintenance expenses, if any, subject to prudence check by the Commission:

Provided that the average of such Operation and Maintenance expenses shall be considered as Operation and Maintenance expenses for the Year ended March 31, 2018, and shall be escalated at the respective escalation rate for FY 2018-19 and FY 2019-20, to arrive at the Operation and Maintenance expenses for the base year ending March 31, 2020:

Provided further that the escalation rate for FY 2018-19 and FY 2019-20 shall be computed by considering 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years as per the Labour Bureau, Government of India:

Provided also that at the time of true-up for each Year of this Control Period, the Operation and Maintenance expenses shall be derived on the basis of the Final Trued-up Operation and Maintenance expenses after adding/deducting the sharing of efficiency gains/losses, for the base year ending March 31, 2020, excluding abnormal expenses, if any, subject to prudence check by the Commission, and shall be considered as the Base Year Operation and Maintenance expenses.

- 75.3 The Operation and Maintenance expenses for each subsequent year shall be determined by escalating these Base Year expenses of FY 2019-20 by an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the past five financial years as per the Labour Bureau, Government of India, as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, to arrive at the permissible Operation and Maintenance expenses for each year of the Control Period:

Provided that, in the Truing-up of the O&M expenses for any particular year of the Control Period, an inflation factor with 30% weightage to the average yearly inflation

derived based on the monthly Wholesale Price Index of the respective past five financial years (including the year of Truing-up) and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years (including the year of Truing-up), as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, shall be applied to arrive at the permissible Operation and Maintenance Expenses for that year:

Provided further that the efficiency factor shall be considered as zero, in case there is an increase in the number of consumers including Open Access consumers connected to the Distribution Wires of at least 2 percent annually over the last 3 years:

Provided also that in case such increase in the number of consumers is lower than 2 percent annually over the last 3 years, then the reduction in efficiency factor shall be considered in proportion to the percentage growth in the number of consumers.

- 75.4 The impact of Wage Revision, if any, may be considered at the time of true-up for any Year, based on documentary evidence and justification to be submitted by the Petitioner:

Provided that if actual employee expenses are higher than normative expenses on this account, then no sharing of efficiency losses shall be done to that extent:

Provided further that efficiency gains shall not be allowed by deducting the impact of Wage Revision and comparison of such reduced value with normative value.

- 75.5 Provisioning of wage revision expenses shall not be considered as actual expenses at the time of true-up, and only expenses as actually incurred shall be considered.

- 75.6 In case the expenditure on Repairs & Maintenance falls below 20% of total O&M expenses allowed under these Regulations, then such savings in Repairs & Maintenance shall not be set off against other heads of O&M expenses:

Provided that this limitation shall not be applicable for Deemed Distribution Licensees for the first five years after commencement of operations as a Distribution Licensee.

- 75.7 A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:

Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.

- 75.8 In the case of a Deemed Distribution Licensee whose tariff is yet to be determined by the Commission till the coming into force of these Regulations, the Commission may determine the Operation and Maintenance expenses on a case to case basis.

## **76 Provision for Bad and Doubtful Debts**

In the MYT Order, for each Year of the Control Period, the Commission may allow a provision for writing off of bad and doubtful debts up to 1.5% of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the latest Audited Accounts of the Distribution Licensee in accordance with the procedure laid down by the Licensee, subject to prudence check:

Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts during the year, subject to the above ceiling of 1.5% of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the audited accounts of the Distribution Licensee for that Year, after prudence check:

Provided further that if subsequent to the write off of a particular bad debt, revenue is realised from such bad debt, the same shall be included as an uncontrollable item under the Non-Tariff Income of the year in which such revenue is realised:

Provided also that in the Year when the cumulative provisioning for write-off of bad and doubtful debts allowed by the Commission, duly allocated for the Distribution Wires Business, exceeds five per cent of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the audited accounts of the Distribution Licensee, no such appropriation shall be allowed, which would have the effect of increasing the cumulative provisioning beyond the said maximum:

Provided also that for Distribution Licensees having agricultural sales in excess of 20 percent of their total sales, the ceiling of cumulative provisioning in the above proviso shall be 7.5 per cent of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the audited accounts of the Distribution Licensee.

## **77 Non-Tariff Income**

77.1 The amount of Non-Tariff Income relating to the Distribution Wires Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the Wheeling Charges of the Distribution Wires Business:

Provided that the Distribution Licensee shall submit full details of its forecast of Non-Tariff Income to the Commission in such form as may be stipulated by the Commission.

77.2 The Non-Tariff Income shall include:

- a) Income from rent of land or buildings;

- b) Income from sale of scrap;
- c) Income from investments;
- d) Interest income on advances to suppliers/contractors;
- e) Income from rental from staff quarters;
- f) Income from rental from contractors;
- g) Income from hire charges from contractors and others;
- h) Income from consumer charges levied in accordance with Schedule of Charges approved by the Commission;
- i) Supervision charges for capital works;
- j) Income from advertisements;
- k) Income from sale of tender documents;
- l) Any other Non-Tariff Income:

Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated Business of the Distribution Wires Business shall not be included in Non-Tariff Income.

## **78 Income from Other Business**

Where the Distribution Wires Business of the Distribution Licensee has engaged in any Other Business under Section 51 of the Act for optimum utilisation of its assets, an amount equal to two-thirds of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the Aggregate Revenue Requirement in determining the Wheeling Charges of Distribution Wires Business:

Provided that the Distribution Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Distribution Wires Business and the Other Business and shall submit the Allocation Statement, duly certified by the Statutory Auditor of the Company, to the Commission along with its Petition for determination of Wheeling Charges:

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

## **79 Wheeling Losses**

The Distribution Wires Business shall be allowed to recover, in kind, the approved target level of Wheeling Losses arising from the operation of the distribution system:

Provided that the Commission may stipulate a trajectory for Wheeling Losses in accordance with Regulation 7 as part of the Order on the Multi-Year Tariff Petition filed by the Distribution Licensee.

## **PART H: RETAIL SUPPLY OF ELECTRICITY**

### **80 Applicability**

The Regulations contained in this Part shall apply to the determination of Tariff for retail supply of electricity by a Distribution Licensee to its consumers.

### **81 Components of Aggregate Revenue Requirement for Retail Supply Business**

81.1 The Tariff for retail supply of the Distribution Licensee shall provide for the recovery of the Aggregate Revenue Requirement of the Retail Supply Business for the respective Years of the Control Period, as approved by the Commission and comprising the following components:

- (a) Cost of own power generation /power purchase expenses;
- (b) Inter-State Transmission Charges;
- (c) Intra-State Transmission Charges;
- (d) MSLDC Fees & Charges;
- (e) Operation and Maintenance expenses;
- (f) Depreciation;
- (g) Interest on Loan Capital;
- (h) Interest on working capital;
- (i) Interest on consumer security deposits;
- (j) Provision for Bad and doubtful debts; and
- (k) Contribution to contingency reserves;
- (l) Return on Equity Capital;
- (m) Income Tax;

**minus:**

- (n) Non-Tariff income;
- (o) Income from Other Business, to the extent specified in these Regulations;
- (p) Receipts on account of Cross-Subsidy Surcharge;
- (q) Receipts on account of Additional Surcharge;

Provided that Depreciation, Interest on Loan Capital, Interest on working capital, Interest on consumer security deposits, Contribution to Contingency Reserves, Return on Equity, and Income Tax for Retail Supply Business shall be allowed in accordance with the provisions specified in **Part D** of these Regulations:

Provided further that prior period income/expenses shall be allowed by the Commission at the time of truing up based on audited accounts, on a case to case basis, if the income/expenses in that prior period have been allowed on actual basis, subject to prudence check:

Provided also that all penalties and compensation payable by the Licensee to any party for failure to meet any Standards of Performance or for damages, as a consequence of the orders of the Commission, Courts, Consumer Grievance Redressal Forum, and Ombudsman, etc., shall not be allowed to be recovered through the Aggregate Revenue Requirement:

Provided also that the Distribution Licensee shall maintain separate details of such penalties and compensation paid or payable by the Licensee, if any, and shall submit them to the Commission along with its Petition.

- 81.2 The Tariff for retail supply by the Distribution Licensee shall be determined by the Commission on the basis of a Petition for determination of Tariff filed by the Distribution Licensee in accordance with **Part B** of these Regulations:

Provided that the Aggregate Revenue Requirement of the Distribution Licensee shall be allocated or apportioned between the Distribution Wires Business and Retail Supply Business in accordance with the provisions of Regulation 71:

Provided further that the Tariff for retail supply may comprise any combination of fixed/demand charges, energy charges, and any other charges, for the purpose of recovery from the consumers, as may be stipulated by the Commission:

Provided also that the Commission may determine the area-wise Tariff for Distribution Licensee based on the performance parameters as may be stipulated by the Commission:

Provided also that in case of a Deemed Distribution Licensee whose tariff is yet to be determined by the Commission till the date of coming into effect of these Regulations,

the Commission may determine the ceiling Tariff for retail supply that may be charged by such Distribution Licensee till such time as considered appropriate by the Commission.

81.3 The Tariff for retail supply by the Distribution Licensee shall continue to be billed at the Tariff approved by the Commission and applicable as on March 31, 2020 for the period starting from April 1, 2020 till approval of Tariff for retail supply by the Commission in accordance with these Regulations.

81.4 The Distribution Licensee may propose other rebates for inter-alia, taking supply at higher voltages, bulk consumption, power factor, etc., as a part of their Petition, and the revenue impact of rebates shall be passed on through the Aggregate Revenue Requirement and tariffs, subject to the Commission's approval.

81.5 The Distribution Licensee may offer a rebate to the consumers on the Tariff and charges determined by the Commission:

Provided that the Distribution Licensee shall submit details of such rebates to the Commission every quarter, in the manner and format, as stipulated by the Commission:

Provided further that the impact of such rebates on the Distribution Licensee shall be borne entirely by the Distribution Licensee and the impact of such rebate shall not be passed on to the consumers, in any form:

Provided also that such rebates shall not be offered selectively to any consumer/s, and shall have to be offered to the entire consumer category/sub-category/consumption slab in a non-discriminatory manner.

## **82 Sales forecast**

82.1 The Distribution Licensee shall submit a month-wise forecast of the expected sales of electricity to each Tariff category/sub-category and to each Tariff slab within such Tariff category/sub-category to the Commission for approval along with the Multi-Year Tariff Petition, as specified in these Regulations:

Provided that the Distribution Licensee shall submit relevant details regarding category-wise sales separately for each Distribution Franchisee area within its Licence area, as well as the aggregated category-wise sales in its Licence area.

82.2 The sales forecast shall be consistent with the load forecast prepared as part of the power procurement plan under **Part C** of these Regulations and shall be based on past data and reasonable assumptions regarding the future:

Provided that where the Commission has stipulated a methodology for forecasting sales to any particular Tariff category, the Distribution Licensee shall incorporate such methodology in developing the sales forecast for such Tariff category.

### **83 Capital Investment Plan**

- 83.1 The Distribution Licensee shall submit a detailed Capital Investment Plan, financing plan and physical targets for each Year of the Control Period for meeting the requirement of growth in number of consumers, reduction in distribution losses, metering, etc., to the Commission for approval, as a part of the Multi-Year Tariff Petition for the entire Control Period.
- 83.2 The Capital Investment Plan shall be a least cost plan for undertaking investments and shall cover all capital expenditure projects of a value exceeding Rs. One Crore or such other amount as may be stipulated by the Commission and shall be in such form as may be stipulated by the Commission from time to time.
- 83.3 The Capital Investment Plan shall be accompanied by such information, particulars and documents as may be required showing the need for the proposed investments, alternatives considered, cost-benefit analysis and other aspects that may have a bearing on the Tariff for retail supply of electricity.
- 83.4 The Commission shall consider the Capital Investment Plan along with the Multi-Year Aggregate Revenue Requirement for the entire Control Period submitted by the Distribution Licensee taking into consideration the prudence of the proposed expenditure and estimated impact on the Tariff for retail supply of electricity.
- 83.5 The Distribution Licensee shall submit, along with the Petition for determination of the Tariff for retail supply of electricity, or along with the Petition for Mid-term Performance Review, as the case may be, details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require to assess such progress.

### **84 Operation and Maintenance Expenses**

- 84.1 The Distribution Licensees shall be permitted to recover Operation and Maintenance expenses relating to the Retail Supply Business in accordance with this Regulation.
- 84.2 The Operation and Maintenance expenses shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/deducting the share of efficiency gains/losses, for the three Years ending March 31, 2019, excluding abnormal

Operation and Maintenance expenses, if any, subject to prudence check by the Commission:

Provided that the average of such Operation and Maintenance expenses shall be considered as Operation and Maintenance expenses for the Year ended March 31, 2018, and shall be escalated at the respective escalation rate for FY 2018-19 and FY 2019-20, to arrive at the Operation and Maintenance expenses for the base year ending March 31, 2020:

Provided further that the escalation rate for FY 2018-19 and FY 2019-20 shall be computed by considering 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years as per the Labour Bureau, Government of India:

Provided also that at the time of true-up for each Year of this Control Period, the Operation and Maintenance expenses shall be derived on the basis of the Final Trued-up Operation and Maintenance expenses after adding/deducting the sharing of efficiency gains/losses, for the base year ending March 31, 2020, excluding abnormal expenses, if any, subject to prudence check by the Commission, and shall be considered as the Base Year Operation and Maintenance expenses.

- 84.3 The Operation and Maintenance expenses for each subsequent year shall be determined by escalating these Base Year expenses of FY 2019-20 by an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the past five financial years as per the Labour Bureau, Government of India, as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, to arrive at the permissible Operation and Maintenance expenses for each year of the Control Period:

Provided that, in the Truing-up of the O&M expenses for any particular year of the Control Period, an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years (including the year of Truing-up) and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years (including the year of Truing-up), as reduced by an efficiency factor of 1% or as may be stipulated by the Commission

from time to time, shall be applied to arrive at the permissible Operation and Maintenance Expenses for that year:

Provided further that the efficiency factor shall be considered as zero, in case there is an increase in the number of consumers including Open Access consumers of at least 2 percent annually over the last 3 years:

Provided also that in case such increase in the number of consumers is lower than 2 percent annually over the last 3 years, then the reduction in efficiency factor shall be considered in proportion to the percentage growth in the number of consumers.

84.4 The impact of Wage Revision, if any, may be considered at the time of true-up for any Year, based on documentary evidence and justification to be submitted by the Petitioner:

Provided that if actual employee expenses are higher than normative expenses on this account, then no sharing of efficiency losses shall be done to that extent:

Provided further that efficiency gains shall not be allowed by deducting the impact of Wage Revision and comparison of such reduced value with normative value.

84.5 Provisioning of wage revision expenses shall not be considered as actual expenses at the time of true-up, and only expenses as actually incurred shall be considered.

84.6 In case the expenditure on Repairs & Maintenance falls below 20% of total O&M expenses allowed under these Regulations, then such savings in Repairs & Maintenance shall not be set off against other heads of O&M expenses:

Provided that this limitation shall not be applicable for Deemed Distribution Licensees for the first five years after commencement of operations as a Distribution Licensee.

84.7 A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:

Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.

84.8 In the case of a Deemed Distribution Licensee whose tariff is yet to be determined by the Commission till the coming into force of these Regulations, the Commission may determine the Operation and Maintenance expenses on a case to case basis.

## **85 Provision for Bad and Doubtful Debts**

In the MYT Order, for each Year of the Control Period, the Commission may allow a provision for writing off of bad and doubtful debts up to 1.5% of the amount shown as Trade Receivables

or Receivables from Sale of Electricity in the latest Audited Accounts of the Distribution Licensee in accordance with the procedure laid down by the Licensee, subject to prudence check:

Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts during the year, subject to the above ceiling of 1.5% of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the audited accounts of the Distribution Licensee for that Year, after prudence check:

Provided further that if subsequent to the write off of a particular bad debt, revenue is realised from such bad debt, the same shall be included as an uncontrollable item under the Non-Tariff Income of the year in which such revenue is realised:

Provided also that in the Year when the cumulative provisioning for write-off of bad and doubtful debts allowed by the Commission, duly allocated for the Retail Supply Business exceeds five per cent of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the audited accounts of the Distribution Licensee, no such appropriation shall be allowed, which would have the effect of increasing the cumulative provisioning beyond the said maximum:

Provided also that for Distribution Licensees having agricultural sales in excess of 20 percent of their total sales, the ceiling of cumulative provisioning in the above proviso shall be 7.5 per cent of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the audited accounts of the Distribution Licensee.

## **86 Non-Tariff Income**

86.1 The amount of Non-Tariff Income relating to the Retail Supply Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the Tariff for retail supply of electricity by the Distribution Licensee:

Provided that the Distribution Licensee shall submit details of its forecast of Non-Tariff income to the Commission in such form as may be stipulated by the Commission.

86.2 The Non-Tariff Income shall include:

- a) Income from rent of land or buildings;
- b) Income from sale of scrap;
- c) Income from investments;
- d) Interest income on advances to suppliers/contractors;

- e) Income from rental from staff quarters;
- f) Income from rental from contractors;
- g) Income from hire charges from contractors and others;
- h) Supervision charges for capital works;
- i) Income from consumer charges levied in accordance with Schedule of Charges approved by the Commission;
- j) Income from recovery against theft and/or pilferage of electricity;
- k) Income from advertisements;
- l) Income from sale of tender documents;
- m) Any other Non-Tariff Income:

Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated Business of the Retail Supply Business shall not be included in Non-Tariff Income.

#### **87 Income from Other Business**

Where the Retail Supply Business of the Distribution Licensee has engaged in any Other Business under Section 51 of the Act for optimum utilisation of its assets, an amount equal to two-thirds of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the Aggregate Revenue Requirement in calculating the Tariff for retail supply of electricity by the Distribution Licensee:

Provided that the Distribution Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Retail Supply Business and the Other Business and shall submit the Allocation Statement, duly certified by the Statutory Auditor of the Company, to the Commission along with its Petition for determination of Tariff:

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

#### **88 Receipts on account of Cross-Subsidy Surcharge**

The amount received by the Distribution Licensee by way of Cross-Subsidy Surcharge, as approved by the Commission in accordance with the Regulations of the Commission governing

Distribution Open Access, shall be deducted from the Aggregate Revenue Requirement in determining the Tariff for retail supply of electricity by such Distribution Licensee.

#### **89 Receipts on account of Additional Surcharge**

The amount received by the Distribution Licensee by way of Additional Surcharge, as approved by the Commission in accordance with the Regulations of the Commission governing Distribution Open Access, shall be deducted from the Aggregate Revenue Requirement for determining the Tariff for retail supply of electricity by such Distribution Licensee.

#### **90 Distribution Losses**

The power purchase requirement of the Distribution Licensee at the Transmission-Distribution interface point, shall be computed by grossing up the sales with the distribution losses approved by the Commission:

Provided that the Commission may stipulate the target distribution losses in accordance with Regulation 7 as part of the Order on the Multi-Year Tariff Petition:

Provided further that the Distribution Licensee shall submit the details of area-wise distribution losses for the relevant years, in accordance with the formats prescribed by the Commission:

Provided also that the area-wise distribution losses shall separately indicate the distribution losses in each Distribution Franchisee area within its Licence area, for the relevant years.

#### **91 Determination of Retail Supply Tariff**

91.1 The Commission may categorize consumers on the basis of their load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.

91.2 The Commission may determine additional or reduced area-specific charges to reflect instances of area peculiarity in terms of high/low distribution losses, high/low reliability of power supply, high reinstatement charges levied by the local body, capital expenditure incurred for purposes beyond Universal Service Obligation and safety measures, etc.:

Provided that depending on the local requirements, additional or reduced tariff could be imposed in certain areas, as appropriate

91.3 The retail supply tariff for different consumer categories shall be determined on the basis of the Average Cost of Supply, computed as the ratio of the Aggregate Revenue

Requirement of the Distribution Licensee for the Year determined in accordance with Regulation 81, and including unrecovered revenue gaps of previous years to the extent proposed to be recovered, to the total sales of the Distribution Licensee for the respective Year.

91.4 The Commission shall endeavour to gradually reduce the cross-subsidy between consumer categories with respect to the Average Cost of Supply in accordance with the provisions of the Act.

91.5 While determining the tariff, the Commission shall also keep in view the cost of supply at different voltage levels and the need to minimise tariff shock to consumers.

## **PART I: FEES AND CHARGES FOR MSLDC**

### **92 Applicability**

The Regulations contained in this Part shall apply in determining the Fees and Charges to be levied by the MSLDC after April 1, 2020.

### **93 Capital Investment Plan**

93.1 The MSLDC shall submit a detailed capital investment plan, financing plan and physical targets for each Year of the Control Period based on the operational requirements prescribed by the Commission and recommendations of various Committees constituted for looking into matters related to strengthening and ring fencing of the State Load Despatch Centres by the Ministry of Power, Government of India or any such other statutory authorities, to the Commission for approval, as a part of the Multi-Year Aggregate Revenue Requirement for the entire Control Period.

93.2 The Capital Investment Plan shall be a least cost plan for undertaking investments and shall cover all capital expenditure projects of a value exceeding Rs. One crore or any other limit as may be stipulated by the Commission from time to time and shall be in such form as may be stipulated by the Commission.

93.3 The Capital Investment Plan shall be accompanied by such information, particulars and documents as may be required showing the need for the proposed investments, alternatives considered, cost/benefit analysis and other aspects that may have a bearing on the MSLDC Fees and Charges.

93.4 The Commission shall consider the Capital Investment Plan along with the Multi-Year Aggregate Revenue Requirement for the entire Control Period submitted by the MSLDC

taking into consideration the prudence of the proposed expenditure and estimated impact on MSLDC Fees and Charges.

93.5 The MSLDC shall submit, along with the Petition for determination of Aggregate Revenue Requirement or along with the Petition for Mid-term Performance Review, as the case may be, details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require to assess such progress.

#### **94 LDC Development Fund**

The Commission may permit MSLDC to create and maintain a separate development fund for such purposes and from such sources of income, as the Commission may consider appropriate, on a Petition filed by MSLDC.

#### **95 Annual Fixed Charges for MSLDC**

The Annual Fixed Charges to be levied by the MSLDC shall provide for the recovery of the Aggregate Revenue Requirement of the MSLDC for the respective Year of the Control Period, as reduced by the amount of Non-Tariff Income as approved by the Commission and comprising the following:

- (a) Operation and Maintenance expenses;
  - (b) Regional Load Despatch Centre (RLDC) Fees and Western Region Power Committee (WRPC) Charges;
  - (c) Depreciation;
  - (d) Interest on Loan Capital;
  - (e) Interest on working capital
  - (f) Return on Equity Capital;
  - (g) Income Tax;
- minus:**
- (h) Income from Open Access charges;
  - (i) Non-Tariff income:

Provided that Depreciation, Interest on Loan, and Return on Equity for the MSLDC shall be allowed in accordance with the provisions specified in **Part D** of these Regulations:

Provided further that prior period income/expenses shall be allowed by the Commission at the time of truing up based on audited accounts, on a case to case basis, if the income/expenses in that prior period have been allowed on actual basis, subject to prudence check:

Provided also that all penalties and compensation payable by the MSLDC to any party for failure to meet its obligations or for damages, as a consequence of the orders of the Commission and Courts shall not be allowed to be recovered through the Aggregate Revenue Requirement:

Provided also that the MSLDC shall maintain separate details of such penalties and compensation paid or payable by the MSLDC, if any, and shall submit the same to the Commission along with the Petitions to be submitted under these Regulations.

## **96 Operation and Maintenance expenses**

96.1 The Operation and Maintenance expenses for the MSLDC shall be computed in accordance with this Regulation.

96.2 The Operation and Maintenance expenses shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/deducting the share of efficiency gains/losses, for the three Years ending March 31, 2019, excluding abnormal Operation and Maintenance expenses, if any, subject to prudence check by the Commission:

Provided that the average of such Operation and Maintenance expenses shall be considered as Operation and Maintenance expenses for the Year ended March 31, 2018, and shall be escalated at the respective escalation rate for FY 2018-19 and FY 2019-20, to arrive at the Operation and Maintenance expenses for the base year ending March 31, 2020:

Provided further that the escalation rate for FY 2018-19 and FY 2019-20 shall be computed by considering 20% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 80% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years as per the Labour Bureau, Government of India.

96.3 At the time of true-up for each Year of this Control Period, the Operation and Maintenance expenses shall be derived on the basis of the Final Trued-up Operation and Maintenance expenses after adding/deducting the sharing of efficiency gains/losses, for the year ending March 31, 2020, excluding abnormal expenses, if any, subject to

prudence check by the Commission, and shall be considered as the Base Year Operation and Maintenance expenses:

Provided that the Operation and Maintenance expenses for each subsequent year shall be determined by escalating these Base Year expenses of FY 2019-20 by an inflation factor with 20% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 80% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the past five financial years as per the Labour Bureau, Government of India, as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, to arrive at the permissible Operation and Maintenance expenses for each year of the Control Period:

Provided further that, in the Truing-up of the O&M expenses for any particular year of the Control Period, an inflation factor with 20% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years (including the year of Truing-up) and 80% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years (including the year of Truing-up), as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, shall be applied to arrive at the permissible Operation and Maintenance Expenses for that year.

- 96.4 The impact of Wage Revision, if any, may be considered at the time of true-up for any Year, based on documentary evidence and justification to be submitted by the Petitioner:

Provided that if actual employee expenses are higher than normative expenses on this account, then no sharing of efficiency losses shall be done to that extent:

Provided further that efficiency gains shall not be allowed by deducting the impact of Wage Revision and comparison of such reduced value with normative value.

- 96.5 Provisioning of wage revision expenses shall not be considered as actual expenses at the time of true-up, and only expenses as actually incurred shall be considered.

- 96.6 The MSLDC may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:

Provided that the MSLDC shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.

## **97 RLDC Fees and WRPC Charges**

97.1 The RLDC Fees and Charges payable by the MSLDC in accordance with the relevant Orders issued by the Central Electricity Regulatory Commission from time to time shall be allowed to be recovered by the MSLDC through the Fees and Charges as approved by the Commission.

97.2 The MSLDC shall have to produce documentary proof towards payment of such Charges at the time of Mid-Term Review or Truing up:

Provided that any variation between the approved RLDC Fees and Charges and WRPC Charges and that actually paid by the MSLDC shall be considered during the true-up as per audited accounts, subject to prudence check and any other factor considered appropriate by the Commission.

## **98 Non-Tariff Income**

98.1 The amount of Non-Tariff Income relating to the MSLDC as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the Fees and Charges of the MSLDC:

Provided that the MSLDC shall submit full details of its forecast of Non-Tariff Income to the Commission in such form as may be stipulated by the Commission.

98.2 The Non-Tariff Income shall include:

- a) Income from sale of scrap;
- b) Income from investments;
- c) Interest income on advances to suppliers/contractors;
- d) Income from rental from staff quarters;
- e) Income from sale of tender documents;
- f) Any other Non-Tariff Income:

Provided that the interest earned from investments made out of Return on Equity of the MSLDC shall not be included in Non-Tariff Income.

## **99 Sharing of MSLDC Charges**

99.1 The MSLDC Charges payable by the Transmission System Users shall be computed in accordance with the following formula:

$$AFC(u)_{(t)} = AFC_{(t)} \times ([Base\ TCR(u)]_{(t)} / \sum_{i=1}^n [Base\ TCR(u)]_{(t)})$$

Where,

$AFC(u)_{(t)}$  = MSLDC Charges to be shared by the Beneficiary (u) for the Yearly period (t);

$AFC(t)$  = Total MSLDC Charges to be shared by the Beneficiaries for the Yearly period (t);

$$Base\ TCR\ (u) = [CPD(u)_{(t)} + NCPD(u)_{(t)}] / 2$$

Where,

Base TCR represents the Base Transmission Capacity Right of each Beneficiary (u) for the Yearly period (t);

$CPD\ (u)_{(t)}$  = Average Coincident Peak Demand of the Beneficiary (u) for the Yearly period (t);

$NCPD\ (u)_{(t)}$  = Average Non-coincident Peak Demand of the Beneficiary (u) for the Yearly period (t);

Provided that the Allotted Capacity for long-term Open Access Users, excluding partial long-term Users, shall be considered in lieu of the average monthly CPD and NCPD for calculating the Base TCR for Open Access consumers.

99.2 The MSLDC Charges approved for the Year shall be equally spread over the 12 months of the Year and MSLDC Charges per MW per month shall be computed by MSLDC in accordance with the following Formula:

Monthly MSLDC Charges (Rs. / MW / Month)

$$= [AFC(u)_{(t)} \div \sum_{i=1}^n [Base\ TCR(u)]_{(t)}] \div 12$$

99.3 The Open Access consumers excluding those covered under Regulation 99.1, shall be liable for payment of the MSLDC Charges in proportion to the duration for which they were granted Open Access during the concerned billing period.

99.4 The Charges to be recovered by MSLDC shall continue to be billed at the Tariff approved by the Commission and applicable as on March 31, 2020 for the period starting from April 1, 2020 till approval of Charges by the Commission in accordance with these Regulations.

## **100 Fees to be Charged by MSLDC**

100.1 The MSLDC shall recover the following Fees as approved by the Commission from time to time:

- a) Registration or Connection Fees per connection from all users connecting to the Intra-State Transmission System;
- b) Scheduling Fees per day for intra-State short-term Open Access transactions;
- c) Re-scheduling Fees for each revision in schedule after the finalization of schedules by the MSLDC on a day-ahead basis or for non-submission of schedule as per State Grid Code requirements;
- d) Short-term Open Access Application Processing Fees;
- e) Any other Fees approved by the Commission from time to time.

100.2 The revenue from such Fees shall be considered for adjustment of Annual Fixed Charges in subsequent Years unless the same forms part of the LDC Development Fund.

### **101 Billing and Payment of Charges**

101.1 The MSLDC shall raise monthly bill for MSLDC Charges on every Long-term Beneficiary and Medium-Term Open Access consumer on the first working day of the month for the MSLDC Charges of preceding month.

101.2 The monthly bill for MSLDC Charges shall be payable within thirty days of receipt of bill by the Long-term Beneficiaries and the Medium Term Open Access consumers.

## **PART J: GRANT OF SUBSIDIES BY STATE GOVERNMENT**

### **102 Manner of grant of subsidy by State Government**

102.1 If the State Government requires the grant of any subsidy to any consumer or class of consumers in the Tariff determined by the Commission, the State Government shall pay in advance the amount to compensate the Distribution Licensee/person affected by the grant of subsidy in the manner specified in this Regulation, with prior intimation to the Commission.

102.2 The amount of subsidy agreed to by the State Government shall be provided in the form of grant by the State Government.

102.3 The subsidy shall be passed on to eligible consumers through credit in their electricity bills only in proportion to the extent to which the total requirement of the Distribution Licensee is paid by the State Government:

Provided that in case of shortfall in actual release of subsidy, either because of errors in estimation or for any other reason, such shortfall, shall be shown clearly in the

consumers' bills and shall be distributed proportionately between the concerned eligible consumers until such time as it is reduced or eliminated.

102.4 The Distribution Licensee shall clearly indicate the following details in the consumers' bills:

- a) the Tariff determined by the Commission;
- b) the amount of State Government subsidy and the rate and period thereof;
- c) the net amount payable.

## **PART K: MISCELLANEOUS**

### **103 Issue of Practice Directions**

Subject to the provisions of the Act, the Commission may, from time to time, issue Practice Directions in regard to implementation of these Regulations.

### **104 Power to amend**

The Commission may, at any time, vary, alter, modify or amend any provisions of these Regulations.

### **105 Power to relax**

The Commission may by general or special order, for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely to be affected by grant of relaxation, may relax any of provisions of these Regulations on its own motion or on an application made before it by an interested person.

### **106 Power to remove difficulties**

If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

## Annexure-I: DEPRECIATION SCHEDULE

Description of Assets		Depreciation Rate (Straight line method)
A.	Land owned under full title	--
B.	Land held under lease	
a)	for investment in the land	3.34%
b)	for cost of clearing the site	3.34%
c)	Land for reservoir in case of Hydro Generating Station	3.34%
C.	Assets Purchased New:	
a.	Plant and machinery in Generating Stations including plant foundations	
i)	Hydro-electric	5.28%
ii)	Steam electric	5.28%
	NHRS & Waste Heat Recovery Boilers/Plants	
iii)	Diesel-electric and gas plant	5.28%
b.	Cooling towers and circulating water systems	5.28%
c.	Hydraulic works forming part of Hydro-electric systems including:-	
i)	Dams, Spillways, weirs, canals, reinforced concrete Flumes and siphons	5.28%
ii)	Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and other hydraulic works	5.28%
d.	Building & civil engineering works of permanent character	
i)	Offices & showrooms	3.34%

Description of Assets			Depreciation Rate (Straight line method)
	ii)	Containing thermo-electric generating plant	3.34%
	iii)	Containing hydro-electric generating plant	3.34%
	iv)	Temporary erection such as wooden structures	100%
	v)	Roads other than kutcha roads	3.34%
	vi)	Others	3.34%
e.		Transformers, transformer (Kiosk) sub-Station equipment & other fixed apparatus (including plant foundations)	
	i)	Transformers (including foundations) having a rating of 100 kilo volt amperes and over	5.28%
	ii)	Others	5.28%
f.		Switchgear including cable connections	5.28%
g.		Lightning arrestors	
	i)	Station type	5.28%
	ii)	Pole type	5.28%
	iii)	Synchronous condenser	5.28%
h.		Batteries	18.00%
	i)	Underground Cable including joint boxes and disconnected boxes	5.28%
	ii)	Cable duct system	5.28%
i.		Overhead lines including supports:	
	i)	Lines on fabricated steel operating at nominal voltages higher than 66 kV	5.28%

Description of Assets			Depreciation Rate (Straight line method)
	ii)	Lines on steel supports operating at nominal voltages higher than 13.2 kilovolts but not exceeding 66 kilovolts	5.28%
	iii)	Lines on steel or reinforced concrete supports	5.28%
	iv)	Lines on treated wood supports	5.28%
j.		Meters	9.00%
k.		Self-propelled vehicles	9.50%
l.		Air conditioning plants:	
	i)	Static	5.28%
	ii)	Portable	9.50%
m.			
	i)	Office furniture and fittings	6.33%
	ii)	Office equipment	6.33%
	iii)	Internal wiring including fittings and apparatus	6.33%
	iv)	Street light fittings	5.28%
n.		Apparatus let on hire	
	i)	Other than motors	9.50%
	ii)	Motors	6.33%
o.		Communication equipment:	
	i)	Radio and high frequency carrier system	6.33%
	ii)	Telephone lines and telephones	6.33%
	iii)	Fibre Optic	6.33%

<b>Description of Assets</b>			<b>Depreciation Rate (Straight line method)</b>
p.		I.T. equipment	15.00%
q.		Software	30.00%
r.		Any other assets not covered above	5.28%

**Annexure-II: Procedure for calculation of Transmission System Availability for a Month**

1. Transmission system availability for a calendar month shall be computed by the respective Transmission Licensee, and certified by the MSLDC, separately for each AC and HVDC transmission system. For the purpose of calculation of Transmission System Availability:
  - i) AC transmission lines: Each circuit of AC transmission line shall be considered as one element.
  - ii) Inter-Connecting Transformers (ICTs): Each ICT bank (three single phase transformer together) shall form one element.
  - iii) Static VAR Compensator (SVC): SVC along with SVC transformer shall form one element. However, 50% credit to inductive and 50% to capacitive rating shall be given.
  - iv) Bus Reactors/Switchable line reactors: Each Bus Reactors/Switchable line reactors shall be considered as one element.
  - v) HVDC Bi-pole links: Each pole of HVDC link along with associated equipment at both ends shall be considered as one element.
  - vi) HVDC back-to-back Station: Each block of HVDC back-to-back Station shall be considered as one element. If associated AC line (necessary for transfer of inter-regional power through HVDC back-to-back Station) is not available, the HVDC back-to-back Station block shall also be considered as unavailable.

2. The Availability of AC and HVDC portion of Transmission system shall be computed as under:

% Availability for AC system

$$= \frac{o \times AV_o + p \times AV_p + q \times AV_q + r \times AV_r}{o + p + q + r} \times 100$$

% Availability for HVDC system

$$= \frac{s \times AV_s + t \times AV_t}{s + t} \times 100$$

Where

o = Total number of AC lines;

$AV_o$	=	Availability of o number of AC lines;
$p$	=	Total number of bus reactors/switchable line reactors;
$AV_p$	=	Availability of p number of bus reactors/switchable line reactors;
$q$	=	Total number of ICTs;
$AV_q$	=	Availability of q number of ICTs;
$r$	=	Total number of SVCs;
$AV_r$	=	Availability of r number of SVCs;
$s$	=	Total number of HVDC poles;
$AV_s$	=	Availability of s number of HVDC poles;
$t$	=	Total number of HVDC back-to-back Station blocks;
$AV_t$	=	Availability of t number of HVDC back-to-back Station blocks.

3. The weightage factor for each category of transmission element shall be as under:
- (a) For each circuit of AC line – Surge Impedance Loading (SIL) for Uncompensated line multiplied by ckt-km.

SIL rating for various voltage levels and conductor configurations is given in **Appendix-I**. However, for the voltage levels and/or conductor configurations not listed in Appendix-I, appropriate SIL based on technical considerations may be used for availability calculation under intimation to long-term transmission customers/DICs.

For compensated AC line, SIL shall be as certified by the Maharashtra State Power Committee (MSPC) Secretariat considering the compensation on the line.

For shunt compensated line, the reduced value of SIL shall be taken in accordance with the location of the reactor. Similarly, in case of the lines with series compensation, the higher SIL shall be taken as per the percentage of compensation.

- (b) For each HVDC pole- The rated MW capacity x ckt-km
- (c) For each ICT bank – The rated MVA capacity
- (d) For SVC- The rated MVAR capacity (inductive and capacitive)
- (e) For Bus Reactor/switchable line reactors – The rated MVAR capacity.
- (f) For HVDC back-to-back Station connecting two Regional grids- Rated MW capacity of each block.

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

**Appendix-I**

**SURGE IMPEDANCE LOADING (SIL) OF AC LINES**

<b>Sl. No.</b>	<b>Line voltage (kV)</b>	<b>Conductor Configuration</b>	<b>SIL (MW)</b>
1	765	Quad Bersimis	2250
2	400	Quad Bersimis	691
3	400	Twin Moose	515
4	400	Twin AAAC	425
5	400	Quad Zebra	647
6	400	Quad AAAC	646
7	400	Triple Snowbird	605
8	400	ACKC(500/26)	556
9	400	Twin ACAR	557
10	220	Twin Zebra	175
11	220	Single Zebra	132
12	132	Single Panther	50
13	66	Single Dog	10

## Appendix-II

### FORMULAE FOR CALCULATION OF AVAILABILITY OF EACH CATEGORY OF TRANSMISSION ELEMENTS

$$AV_o(\text{Availability of } o \text{ no. of AC lines}) = \frac{\sum_{i=1}^o \frac{W_i(T_i - T_{NAi})}{T_i}}{\sum_{i=1}^o W_i}$$

$$AV_s(\text{Availability of } s \text{ no. of HVDC pole}) = \frac{\sum_{j=1}^s \frac{W_j(T_j - T_{NAj})}{T_j}}{\sum_{j=1}^s W_j}$$

$$AV_q(\text{Availability of } q \text{ no. of ICTs}) = \frac{\sum_{k=1}^q \frac{W_k(T_k - T_{NAk})}{T_k}}{\sum_{k=1}^q W_k}$$

$$AV_r(\text{Availability of } r \text{ no. of SVCs}) = \frac{\left[ \sum_{l=1}^r \frac{0.5 W_{l1} (T_{l1} - T_{NA1l})}{T_{l1}} + \sum_{l=1}^r \frac{0.5 W_{cl} (T_{cl} - T_{ACl})}{T_{cl}} \right]}{\left[ \sum_{l=1}^r 0.5 W_{l1} + \sum_{l=1}^r 0.5 W_{cl} \right]}$$

$$AV_p(\text{Availability of } p \text{ no. of Switched Bus reactors}) = \frac{\sum_{m=1}^p \frac{W_m(T_m - T_{NAM})}{T_m}}{\sum_{m=1}^p W_m}$$

$$AV_t(\text{Availability of } t \text{ no. of HVDC Back-to-back Blocks}) = \frac{\sum_{n=1}^t \frac{W_n(T_n - T_{NAn})}{T_n}}{\sum_{n=1}^t W_n}$$

Where  $W_i$  = Weightage factor for  $i^{\text{th}}$  transmission line

$W_j$  = Weightage factor for  $j^{\text{th}}$  HVDC pole

$W_k$  = Weightage factor for  $k^{\text{th}}$  ICT  
 $W_{iI} \& W_{cI}$  = Weightage factors for inductive & capacitive operation of  $l^{\text{th}}$  SVC  
 $W_m$  = Weightage factor for  $m^{\text{th}}$  bus reactor  
 $W_n$  = Weightage factor for  $n^{\text{th}}$  HVDC back to back block.

$T_i, T_j, T_k, T_{iI}, T_{cI}, =$  The total hours of  $i^{\text{th}}$  AC line,  $j^{\text{th}}$  HVDC pole,  $k^{\text{th}}$  ICT,  $l^{\text{th}}$  SVC  
 $T_m \& T_n$  (Inductive Operation),  $l^{\text{th}}$  SVC (Capacitive Operation),  $m^{\text{th}}$  Switched Bus Reactor &  $n^{\text{th}}$  HVDC back-to-back block during the period under consideration (excluding time period for outages not attributable to Transmission Licensee for reasons given in Para 6 of the procedure)  
 $T_{NAi}, T_{NAj}, T_{NAk} =$  The non-availability hours (excluding the time period for  $T_{NAiI}$ ,  
 $T_{NAcI}, T_{NAM}$ , outages not attributable to transmission Licensee taken as  $T_{NAN}$ , deemed availability as per Para 5 of the procedure) for  $i^{\text{th}}$  AC line,  $j^{\text{th}}$  HVDC pole,  $k^{\text{th}}$  ICT,  $l^{\text{th}}$  SVC (Inductive Operation),  $l^{\text{th}}$  SVC (Capacitive Operation),  $m^{\text{th}}$  Switched Bus Reactor and  $n^{\text{th}}$  HVDC back-to-back block.

### **Annexure-III: Computation of Mean Time Between Failure for Generating Station or Unit**

**Mean Time Between Failure** means the arithmetic mean of time between failures of the Generating Unit, excluding planned outages.

Mean Time Between Failures shall be computed as under:

$$\text{Mean Time Between Failure (MTBF) in days} = \frac{\sum_{i=0}^n (Dt_i - Ut_i)}{N}$$

$Dt$  = Start of Downtime, i.e., time at which event of tripping of Generator of Generating or Unit has happened;

$Ut$  = Start of Uptime, i.e., time at which Generator has been restored in the grid after preceding forced outage or failure;

$N$  = Number of failures or forced outages in the year; and

$n$  = Time period, i.e., one year

Provided that planned outages, grid failure, zero scheduling, and reserve shutdown shall not be considered for computation of Mean Time Between Failure:

Provided further that the difference between Start of Downtime ( $Dt$ ) and Start of Uptime ( $Ut$ ) shall be calculated in days or fractions thereof:

Provided also that the Generating Company shall submit MTBF for each Generating Station or Unit, as the case may be, for respective year at the time of truing up, duly certified by MSLDC.

Mumbai

Dated: 1 August, 2019

**(Abhijit Deshpande)**

Secretary,

Maharashtra Electricity Regulatory Commission