



# THE ASSAM GAZETTE

অসাধাৰণ

EXTRAORDINARY

প্ৰাপ্ত কৰ্তৃত্বৰ দ্বাৰা প্ৰকাশিত

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GOVERNMENT OF ASSAM  
ORDERS BY THE GOVERNOR  
ASSAM ELECTRICITY REGULATORY COMMISSION

## NOTIFICATION

The 28th June, 2018

## **Assam Electricity Regulatory Commission (Terms and Conditions for determination of Multi Year Tariff) Regulations, 2018**

No. AERC. 673/2018/196– In exercise of powers conferred under Section 61 read with Section 181(2) (zd) of the Electricity Act, 2003 (36 of 2003) and in supersession of the Assam Electricity Regulatory Commission (Terms and Conditions for determination of Multi Year Tariff) Regulations, 2015 and its Amendments and all other powers enabling it in this behalf, and after previous publication, the Assam Electricity Regulatory Commission hereby makes the following regulations:

### **CHAPTER 1: PRELIMINARY**

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

- 1.1 These Regulations shall be called the Assam Electricity Regulatory Commission (Terms and Conditions for determination of Multi Year Tariff) Regulations, 2018 for Generation, Transmission, SLDC, Wheeling and Retail Supply.
- 1.2 These Regulations shall come into force from the date of their notification in the Official Gazette of the Government of Assam.
- 1.3 These Regulations shall extend to the whole of the State of Assam.
- 1.4 These Regulations shall be applicable for determination of tariff in all cases covered under these Regulations from 1<sup>st</sup> April, 2019 onwards.

- 1.5 However, for all purposes including the review matters pertaining to the period till FY 2018-19, the issues related to determination of tariff shall be governed by Assam Electricity Regulatory Commission (Terms and Conditions for determination of Multi Year Tariff) Regulations, 2015 including amendments thereto.
- 1.6 These Regulations shall be applicable to all existing and future Generating Companies, Transmission Licensees, Distribution Licensees, SLDC and their successors, if any, within the state of Assam under section 62 of the Act.
- (i) for supply of electricity by a generating company to a distribution licensee,
- (ii) for transmission of electricity by a transmission licensee to a distribution licensee or to open access consumers and
- (iii) for wheeling & retail supply of electricity by a distribution licensee.
- (iv) in all other cases where the Commission has the jurisdiction for tariff determination.
- (v) State load dispatch centre.
- 1.7 Notwithstanding anything contained in these regulations the Commission shall adopt the tariffs as may be determined through the process of competitive bidding, under Section 63 of the Act, in accordance with the competitive bidding guidelines notified by the Central Government.
- 1.8 These regulations shall not apply for tariff determination of renewable energy generation projects. The tariff for such generation projects shall be determined as per Assam Electricity Regulatory Commission (Terms & Conditions for determination of Tariff from Renewable Energy Sources) Regulations, 2017 as amended from time to time.

## 2 Definitions

2.1 In these Regulations, unless the context otherwise requires:

- (1) **“Accounting Statement”** means for each financial year, the following statements, namely-
- (i) balance sheet, prepared in accordance with the form contained in Part I of Schedule VI to the Companies Act, 2013 as amended from time to time;
- (ii) profit and loss account, complying with the requirements contained in Part II of Schedule VI to the Companies Act, 2013;
- (iii) cash flow statement, prepared in accordance with the Accounting Standard on Cash Flow Statement (AS-3) of the Institute of Chartered Accountants of India;
- (iv) report of the statutory auditors;
- (v) cost records prescribed by the Central Government under Section 209(1)(d) of the Companies Act, 2013;
- (vi) together with notes thereto, and such other supporting statements and information as the Commission may direct from time to time;

Provided that in case of any local authority engaged in the business of distribution of electricity, the Accounting Statement shall mean the items, as mentioned above, prepared and maintained in accordance with the relevant Acts or Statutes as applicable to such local authority:

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

Provided further that once the Commission notifies the Regulations for submission of Regulatory Accounts, the applications for tariff determination and truing up shall be based on the Regulatory Accounts.

- (2) **“Act”** means the Electricity Act, 2003 (36 of 2003), as amended from time to time;
- (3) **“Additional capitalization”** means the capital expenditure actually incurred or projected to be incurred after the date of commercial operation of the project and admitted by the Commission after prudence check;
- (4) **“Allocation Statement”** means for each financial year, a statement in respect of each of the separate businesses of the of the Generating Company or Transmission Licensee or Distribution Licensee, showing the amounts of any revenue, cost, asset, liability, reserve or provision etc, which has been either:
  - (i) charged from or to each such Other Business together with a description of the basis of that charge; or
  - (ii) determined by apportionment or allocation between different businesses of the licensee including the Licensed Businesses, together with a description of the basis of the apportionment or allocation:

Provided that for the purpose of this Regulation, the licensed business of the Distribution Licensee for an area of supply would be separated as Distribution Wires and Retail Supply business:

Provided further that such allocation statement in respect of a generating station, owned and/or maintained and/or operated by the distribution licensee, shall be maintained in a manner so as to enable tariff determination, stage-wise, Unit wise and/or for the whole generating station.

- (5) **“Applicant”** means a Generating Company or Transmission Licensee or Distribution Licensee who has made an application for determination of Annual Revenue Requirement and Tariff in accordance with the Act and these Regulations and includes a Generating Company or Transmission Licensee or Distribution Licensee whose tariff is the subject of a review by the Commission either on suo-motu basis or on a Petition filed by any interested or affected person or as part of an annual performance review;
- (6) **“Aggregate Revenue Requirement”** means the requirement of the Transmission Licensee or Distribution Licensee or Generating Company or SLDC for recovery, through tariff, of allowable expenses and return on capital pertaining to its Licensed or Regulated Business for a particular financial year, in accordance with these Regulations;
- (7) **“Auxiliary Energy Consumption”** in relation to a period in case of a generating station means the quantum of energy consumed by auxiliary equipment of the generating station, such as the equipment being used for the purpose of operating plant and machinery including switchyard of the generating station and the transformer losses within the generating station, expressed as a percentage of the sum of gross energy generated at the generator terminals of all the units of the generating station

Provided further that power consumed in housing colony and other facilities of a Generating Station including the power consumed in construction phase shall not be included as part of the auxiliary consumption for the purpose of these Regulations.

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

$$Availability = 10000 \times \sum_{i=1}^N DC_i / \{N \times IC \times (100 - AUXn)\} \%$$

Where:

N = number of time blocks in the given period

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

IC = Installed Capacity of the Generating Station in MW

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

- (9) **“Base year”** means the financial year immediately preceding the first year of the Control Period and used for the purposes of these regulations;
- (10) **“Beneficiary”** in relation to a Generating Station means the purchaser of electricity generated at such a Generating Station whose tariff is determined under these Regulations;  
**“Beneficiary”** in relation to transmission business means the person who has contracted the transmission capacity on payment of transmission charges.
- (11) **“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;
- (12) **“Bulk Power Transmission Agreement”** means an executed Agreement that contains the terms and conditions under which a Transmission System User is entitled to access an intra-State transmission system of a Transmission Licensee;
- (13) **“Capital Cost”** means the capital cost as determined in accordance with Chapter 5 of these regulations.
- (14) **“Change in law”** means occurrence of any of the following events:
- a) enactment, bringing into effect or promulgation of any new Indian law; or
  - b) adoption, amendment, modification, repeal or re-enactment of any existing Indian law; or
  - c) change in interpretation or application of any Indian law by a competent court, Tribunal or Indian Governmental Instrumentality which is the final authority under law for such interpretation or application; or
  - d) change by any competent statutory authority in any condition or covenant of any consent or clearances or approval or licence available or obtained for the project; or
  - e) coming into force or change in any bilateral or multilateral agreement/treaty between the Government of India and any other Sovereign Government having implication for the generating station or the transmission system regulated under these Regulations.
- (15) **“Commission”** means the Assam Electricity Regulatory Commission;

- (16) **“Conduct of Business Regulations”** means the Assam Electricity Regulatory Commission (Conduct of Business) Regulations, 2004 as amended from time to time.
- (17) **“Contracted Capacity”** means the capacity in MW contracted by long-term Transmission System User as part of its long term power procurement plan through a power purchase agreement and shall be equivalent to the deemed Transmission Capacity Right of a Transmission System User.
- (18) **“Control Period”** means the period comprising of three years from April 1, 2019 to March 31, 2022, and for every block of three years thereafter or such other period as may be decided by the Commission, for submission of forecast in accordance with Chapter 3 of these Regulations;
- (19) **“Cut-off Date”** means 31st March of the year closing after two years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of a year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation;
- (20) **“Date of Commercial Operation”** means:
- a. in relation to a 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 at least a seven (7) day prior notice to the beneficiaries, from 00:00 hour of which scheduling process as per the Indian Electricity Grid Code (IEGC) / Assam Electricity Grid Code is fully implemented, and in relation to the generating station, the date of commercial operation means the date of commercial operation of the last unit of the generating station;
  - b. in relation to a Unit of a hydro Generating Station, the date declared by the generating company from 00:00 hour of which, after notice to the beneficiaries, scheduling process in accordance with the Indian Electricity Grid Code / Assam Electricity Grid Code is fully implemented, and in relation to the Generating Station as a whole, the date declared by the generating company after demonstrating peaking capability corresponding to installed capacity of the Generating Station through a successful trial run, after notice to the beneficiaries:

Note:

- (i) In case the hydro Generating Station with pondage or storage is not able to demonstrate peaking capability corresponding to the installed capacity for the reasons 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, provided that it shall be mandatory for such hydro Generating Station to demonstrate peaking capability equivalent to installed capacity of the generating Unit or the Generating Station as and when such reservoir/pond level is achieved.
- (ii) In case of purely run-of-river hydro Generating Station, if the Unit or the Generating Station is declared under commercial operation during lean inflows period when the water is not sufficient for such demonstration, it shall be mandatory for such hydro Generating Station or Unit to demonstrate peaking capability equivalent to installed capacity as and when sufficient inflow is available.

- c. in relation to the transmission system, the date declared by the transmission licensee from 00:00 hour of which an element of the transmission system is in regular service after successful charging and trial operation for transmitting electricity and communication signal from sending end to receiving end:

Provided that where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement.

Provided further that in case an element of the transmission system is ready for regular service but is prevented from providing such service for reasons not attributable to the transmission licensee or its suppliers or its contractors but is on account of the delay in commissioning of the concerned generating station or in the commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission with an appropriate application to approve the date of commercial operation of such element of the transmission system.

- d. Date of commercial operation in relation to a communication system or element thereof shall mean the date declared by the transmission licensee from 0000 hour of which a communication system or element is put into service after completion of site acceptance test including transfer of voice and data to respective control centre as certified by the State Load Dispatch Centre.

- (21) **“Day”** means the 24 hour period starting at 00:00 hour;
- (22) **“De-Capitalisation”** for the purpose of the tariff under these regulations, means reduction in Gross Fixed Assets of the project corresponding to the removal/deletion of assets as admitted by the Commission;
- (23) **“De-Commissioning”** means removal from service of a generating station or a unit thereof or transmission system including communication system or element thereof, based on the decision of the Board of Directors/Management Authority of the Generating Company, with intimation to the Central Electricity Authority and the Commission, either on its own or on an application made by the project developer or the beneficiaries or both, that the project cannot be operated due to non performance of the assets on account of technological obsolescence or uneconomic operation or a combination of these factors;
- (24) **“Declared Capacity”** (DC) shall mean the capability of the generating station to deliver ex-bus electricity in MW declared by such generating station in relation to any time-block of the day as defined in the AERC Grid Code or whole of the day, duly taking into account the availability of fuel;

Note:

- (i) In case of a gas turbine generating station or a combined cycle generating station, the generating station shall declare the capacity for units and modules on gas fuel and liquid fuel separately, and these shall be scheduled separately. Total declared capacity and total scheduled generation for the generating station shall be the sum of the declared capacity and scheduled generation for gas fuel and liquid fuel for the purpose of computation of availability and Plant Load Factor respectively.
- (ii) Declared capacity however shall be limited to Installed Capacity.

- (iii) Daily average declared capacity means the sum of capacity declared for every fifteen minutes block during the twenty four hour period divided by ninety six.
- (iv) for hydro power Generating Stations, the ex-bus capacity in MW expected to be available from the Generating Station for the  $i^{\text{th}}$  day of the month, which the station can deliver for at least three (3) hours, taking into account the availability of water. This shall be certified by the Assam State Load Dispatch Centre after the day is over.;
- (25) **“Design Energy”** in relation to a hydro 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;
- (26) **“Distribution Retail Supply Business”** means the business of sale of electricity by a distribution licensee to the consumers within the area of supply in accordance with the terms of the licence for distribution and retail supply of electricity;
- (27) **“Distribution Wheeling Business”** means the business of operating and maintaining a distribution system for wheeling of electricity in the area of supply of the Distribution Licensee;
- (28) **“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 tariff;
- (29) **“Existing Generating Unit/Station”** means a Generating Unit/ Station declared under commercial operation prior to the date of effectiveness of these Regulations;
- (30) **“Existing Project”** means a project declared under commercial operation prior to the date of effect of these Regulations;
- (31) **“Event”** means an unscheduled or unplanned occurrence in the intra-State transmission system including faults, incidents and breakdowns
- (32) **“Fees and Charges Regulations”** means the “AERC (Payment of Fee etc) Regulations, 2015” as amended from time to time.
- (33) **“Force Majeure Event”** means, with respect to any party, any event or circumstance, 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, would include the following events:
- acts of God, including but not limited to lightning, storm, action of the elements, earthquakes, flood, torrential rains, drought and natural disaster;
  - strikes, lockouts, go-slow, bandh or other industrial disturbances not instigated by any party;
  - acts of public enemy, wars (declared or undeclared), blockades, insurrections, riots, revolution, sabotage, vandalism and civil disturbance;
  - unavoidable accident, including but not limited to fire, explosion, radioactive contamination and toxic dangerous chemical contamination;
  - any shutdown or interruption of the grid, which is required or directed by the State or Central Government or by the Commission or the Assam State Load Dispatch Centre; and

- f. any shut down or interruption, which is required to avoid serious and immediate risks of a significant plant or equipment failure.
- (34) **“Gas-engine based Generating Station”** means generating station which generates power through reciprocating gas engines using natural gas or RLNG as fuel.
- (35) **“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 a supply to be so given (ii) for the purpose of supply of electricity to any Distribution Licensee in accordance with the Act and the rules and regulations made thereunder and, (iii) subject to the Regulations made under sub-section (2) of Section 42 of the Act, supply of electricity to any consumer;
- (36) **“Gross Calorific Value”** in relation to a thermal Generating Station means the heat produced in kilocalories by complete combustion of one kilogram of solid fuel or one litre of liquid fuel or one standard cubic metre of gaseous fuel, as the case may be;
- (37) **“Gross Station Heat Rate”** means the heat energy input in kcal required to generate one kWh of electrical energy at generator terminals;
- (38) **“Implementation Agreement”** means the agreement, contract or memorandum of understanding, or any such covenant, entered into (i) between transmission licensee and generating station or (ii) between transmission licensee and developer of the associated transmission system for the execution of project in coordinated manner;
- (39) **“Infirm power”** means electricity injected into the grid prior to the commercial operation of a Unit or Block of the Generating Station;
- (40) **“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) as approved by the Commission from time to time;
- (41) **“Intra-State Transmission System (InSTS)”** means any system for conveyance of electricity by transmission lines within the area of the State and includes all transmission lines, sub-stations and associated equipment of Transmission Licensees in the State;
- (42) **“Licensee”** means any person or persons granted license under Section 14 or exempted under Section 13 of the Act including deemed licensee;
- (43) **“Licensed business”** means the functions and activities, which the licensee(s) is required to undertake in terms of the licence granted by the Commission or as a deemed Licensee(s) under the Act;
- (44) **“Maximum Continuous Rating”** or **“MCR”** in relation to a Unit of the thermal Generating Station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer at rated parameters, and in relation to a Block of a combined cycle thermal Generating Station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer with water or steam injection (if applicable) and corrected to 50 Hz grid frequency and specified site conditions;



- (45) **“New Generating Unit/Station”** means a Generating Unit/Station declared under commercial operation on or after the date of coming into force of these Regulations;
- (46) **“Net Calorific Value”** means the amount of usable heat energy released when a fuel is burned under conditions similar to those in which it is normally used. When fossil fuels are burned, the carbon and hydrogen in these fuels combine with oxygen in the air to produce carbon dioxide and water. Some of the energy released in burning goes into transforming the water into steam and is usually lost. The amount of heat spent in transforming the water into steam is not counted as part of net heat content
- (47) **“Normative Annual Plant Availability Factor” or “NAPAF”** in relation to a thermal generating station means the availability factor specified in Regulation 46.1 and in relation to a hydro generating station means the availability factor specified in Regulation 49.1
- (48) **“Non-Tariff Income”** means 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 wheeling and receipts on account of cross-subsidy surcharge and additional surcharge on charges of wheeling;
- (49) **“Open Access Regulations”** means the Assam Electricity Regulatory Commission (Terms and Conditions for Open Access) Regulations, 2005 as amended from time to time;
- (50) **“Operation and Maintenance expenses” or “O&M expenses”** means the expenditure incurred on operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads but excludes fuel expenses and water charges;
- (51) **“Original Project Cost”** means the capital expenditure incurred by the Generating Company or the Transmission Licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;
- (52) **“Other Business”** means any business undertaken by the Generating Company, Transmission Licensee or Distribution Licensee, other than the business regulated by the Commission;
- (53) **“Plant Availability Factor (PAF)”** in relation to a Generating Station for any period means the average of the daily declared capacities (DCs) for all the days during that period expressed as a percentage of the installed capacity in MW, reduced by the normative auxiliary energy consumption.
- (54) **“Plant Load Factor (PLF)”** in relation to a thermal Generating Station for a given period, means the total sent-out energy corresponding to actual ex-bus 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:

$$Plant Load Factor = 10000 \times \sum_{i=1}^N AG_i / \{N \times IC \times (100 - AUX_n)\} \%$$

Where:

N = number of time blocks in the given period

AG<sub>i</sub> = Actual Ex-bus Generation in MW for the i<sup>th</sup> 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

- (55) **“Project”** means a Generating Station or the transmission system including communication system, as the case may be, and in case of a hydro Generating Station includes all

components of generating facility such as dam, intake water conductor system, power generating station and generating units of the scheme, as apportioned to power generation and in case of thermal generating stations does not include mining if it is a pit head project and dedicated captive coal mine;

- (56) **'Prudence Check'** means scrutiny of reasonableness of capital expenditure incurred or proposed to be incurred, financing plan, use of efficient technology, cost and time over-run and such other factors as may be considered appropriate by the Commission for determination of tariff. While carrying out the Prudence Check, the Commission shall look into whether the generating company or transmission licensee or distribution licensee has been careful in its judgments and decisions for executing the project or has been careful and vigilant in executing the project or other decisions that may have any impact on tariff
- (57) **'Pumped storage hydro generating station'** means a hydro station which generates power through energy stored in the form of water energy, pumped from a lower elevation reservoir to a higher elevation reservoir;
- (58) **"Rated Voltage"** means the manufacturer's design 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;
- (59) **"Regulated Business"** means any electricity business, which is regulated by the Commission;
- (60) **"Run-of-river Generating Station"** means a hydro Generating Station, which does not have upstream pondage;
- (61) **"Run-of-river Generating Station with pondage"** means a hydro Generating Station with sufficient pondage for meeting the diurnal variation of power demand;
- (62) **"Scheduled Energy"** means the quantum of energy scheduled by the State Load Dispatch Centre to be injected into the grid by a generating station for a given time period;
- (63) **"Scheduled Generation"** at any time or for any period or time-block means schedule of ex-bus generation in MW or MWh, given by the State Load Dispatch Centre;

Note:

For the 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.

- (64) **"State Load Dispatch Centre" or "SLDC"** means the centre established by the State Government for purposes of exercising the powers and discharging the functions under Section 31 of the Act;
- (65) **"State Transmission Utility"** means the Board or the Government Company specified as such by the State Government under sub-section (1) of Section 39 of the Act;
- (66) **"Storage type power station"** means a hydro power Generating Station associated with large storage capacity to enable variation in generation of electricity according to demand;

- (67) **“Transmission Service Agreement”** means the agreement, contract, memorandum of understanding, or any such covenant, entered into between the Transmission Licensee / STU and the beneficiary for the operational phase of the transmission system.
- (68) **“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;
- (69) **“Transmission System User”** means a person who has been allotted transmission capacity rights to access an intra-State transmission system pursuant to a Bulk Power Transmission Agreement, except as provided in the Open Access Regulations;
- (70) **“Trial Run”** in relation to generating station or unit thereof shall mean the successful running of the generating station or unit thereof at maximum continuous rating or installed capacity for continuous period of 72 hours in case of unit of a thermal generating station or unit thereof and 12 hours in case of a unit of a hydro generating station or unit thereof:

Provided that where the beneficiaries have been tied up for purchasing power from the generating station, the trial run shall commence after seven days notice by the generating company to the beneficiaries.

- (71) **“Trial operation”** in relation to a transmission system or an element thereof shall mean successful charging of the transmission system or an element thereof for 24 hours at continuous flow of power, and communication signal from sending end to receiving end and with requisite metering system, telemetry and protection system in service enclosing certificate to that effect from concerned State Load Dispatch Centre.
- (72) **“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 hydro Generating Station means turbine-generator and its auxiliaries;
- (73) **“Useful life”** in relation to a Unit of a Generating Station, transmission system and distribution from the date of commercial operation shall mean the following, namely:-
- (i) Coal based thermal generating Station - 25 years
  - (ii) Gas/Liquid fuel based thermal Generating Station - 25 years
  - (iii) Gas-engine based thermal Generating Station – 25 years
  - (iv) Hydro Generating Station including Pump Storage – 35 years
  - (v) AC and DC sub-station- 25 years
  - (vi) Gas Insulated Substation (GIS) – 25 years
  - (vii) Transmission line (including HVAC & HVDC) - 35 years
  - (viii) Distribution line-35 years

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

- (74) **“Wheeling”** means the operation whereby the distribution system and associated facilities of a distribution licensee are used by another person for the conveyance of electricity on payment of charges to be determined under section 62, and in the event where use of the distribution system and associated facilities is by a consumer, on payment of a surcharge in addition to the charges for wheeling as may be determined by the Commission under the first proviso to sub-section (2) of Section 42, an additional surcharge on the charges of wheeling, as may be specified by the Commission, if applicable, to meet the fixed cost of such

distribution licensee arising out of his obligation to supply, under Sub-section (4) of Section 42 and wheeling charges under clause (c) of sub-section (1) of Section 62;

(75) **“Wheeling Business”** means the business of operating and maintaining a distribution system for conveyance of electricity in the area of supply of the distribution licensee.

(76) **“Year”** means the financial year ending on 31st March,

2.2 Words or expressions occurring in these Regulations and not defined shall bear the same meaning as in the Electricity Act, 2003, as amended from time to time.

## CHAPTER 2: GENERAL PRINCIPLES

### 3 Object, Scope of Regulations and Extent of Application

3.1 The objective of these Regulations is to specify the terms and conditions for the determination of tariffs by the Assam Electricity Regulatory Commission for the supply of electricity by a generating company to a distribution licensee, for transmission of electricity, for wheeling of electricity and for retail sale of electricity, and SLDC.

3.2 The Commission in specifying these Regulations is guided by the principles contained in Sections 61 and 62 of the Act, the National Electricity Policy, 2005 and the Tariff Policy, 2016 notified by the Central Government under Section 3 of the Act.

3.3 The Commission shall determine tariff, including terms and conditions thereof, for all matters for which the Commission has jurisdiction under the Act, including in the following cases:-

- (i) Supply of electricity by a Generating Company to a Distribution Licensee;
- (ii) Intra-State transmission of electricity;
- (iii) Wheeling Business for Distribution of electricity;
- (iv) Retail Supply Business of electricity;
- (v) State Load Dispatch Centre;

Provided that the Commission shall determine such tariff, having regard to the terms and conditions contained in Chapter 6,7, 8, 9 & 10 of these Regulations for applications under this Regulation for determination of tariff, for generation, transmission, distribution Wheeling Business and retail supply business and SLDC:

Provided further that the Commission, while determining tariff upon an application made to it under this Regulation, shall also have regard to the terms and conditions of tariff as may be specified by the State Commission of such other State and/or the terms and conditions of tariff as may be specified by the Central Commission where any of the Parties to such transaction come under the jurisdiction of such State Commission or of the Central Commission.

3.4 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.

### 4 Multi-Year Tariff Framework

4.1 The Commission shall determine the tariff for matters covered under clauses (i), (ii), (iii), (iv) and (v) of Regulation 3.3 above under a Multi-Year Tariff framework with effect from 1<sup>st</sup> April 2019.

4.2 The Multi-Year Tariff framework shall be based on the following elements, for calculation of Aggregate Revenue Requirement and expected revenue from tariff and charges for

Generating Companies, Transmission Licensee, SLDC, Distribution Wheeling Business and Retail Supply Business:

- (i) Before commencement of Control Period, a forecast of the Aggregate Revenue Requirement and expected revenue from existing tariff and charges shall be submitted by the applicant and approved by the Commission;
- (ii) A detailed Capital Investment Plan for each year of the Control Period, shall be submitted by the applicant for the Commission's approval;
- (iii) The applicant shall submit operating norms and trajectories of performance parameters for each year of the Control Period, for the Commission's approval
- (iv) The applicant shall submit the forecast of Aggregate Revenue Requirement and expected revenue from existing tariff for each year of the Control Period, and the Commission shall approve the tariff for Generating Companies, SLDC, Transmission Licensee, Distribution Wheeling Business and Retail Supply Business, for each year of the Control Period;
- (v) In its tariff petition, a generating company shall submit information to support the determination of tariff for each generating station
- (vi) Annual Performance review vis-à-vis the approved forecast and categorization of variation in performance as those caused by factors beyond the control of the applicant (uncontrollable items) shall be undertaken by the Commission;
- (vii) True up of the past years based on audited annual accounts of the licensees and the Generation companies.
- (viii) The mechanism for pass-through of approved gains or losses on account of uncontrollable items as specified by the Commission in these Regulations;
- (ix) The mechanism for sharing of approved gains or losses arising out of controllable items as specified by the Commission in these Regulations;
- (x) Tariff determination for Generating Companies, SLDC, Transmission Licensee and Distribution Wheeling Business and Retail Supply Business, for each financial year within the Control period based on the approved forecast. The tariff shall be reviewed at the time of the true-up and annual performance review.
- (xi) There will be no true-up of the controllable items except on account of Force Majeure events or on account of variations attributable to uncontrollable items. The variations in the controllable items, as defined in regulation 10, over and above the norms specified will be governed by incentive and penalty framework specified in these regulations.
- (xii) The tariff determined by the Commission and the directions given in the MYT order shall be the quid pro quo and mutually inclusive. The tariff determined shall, within the time period specified in the order, be subject to the compliance of the directions by the generating company and the licensees to the satisfaction of the Commission. Non-compliance of directions given in the tariff order may also lead to invocation of the provisions of section 142 of the Act.
- (xiii) The tariff determined by the Commission shall continue to operate till it is modified or revised by the Commission.

## 5 Control Period and Baseline

- 5.1 The first Control Period under these Regulations shall be of three financial years from April 1, 2019 to March 31, 2022 and for every block of three years thereafter or such other period as may be decided by the Commission.

Provided that in case any generating station gets commissioned after notification of these Regulations but before commencement of the first Control Period, the Commission may determine the tariff based on the norms as specified for such generating station under these Regulations, under special case through separate Order.

- 5.2 The Commission shall determine baseline values for various financial and operational parameters of ARR for the Control Period taking into consideration the figures approved by the Commission in the past, actual average figures of last three years, audited accounts, estimate of the figures for the relevant year, Industry benchmarks/norms and other factors considered appropriate by the Commission;

Provided that in case of substantial difference between the estimates earlier provided / considered for determination of baseline values and the actual audited accounts, the Commission may re-determine the baseline values for the base year suo-moto or on an application filed by the Applicant

## 6 Capital Investment Plan

- 6.1 The Generating Company, Transmission Licensee, SLDC Business and Distribution Licensee shall submit a Capital Investment Plan for the entire Control Period, as part of the MYT Petition as per the timeline specified in this Regulation and accompanied by the Fee required for processing of Investment plan, as specified in AERC (Payment of Fee) Regulations, 2015.

- 6.2 The Capital Investment Plan for a generating company shall be based on planned generation capacity growth and shall contain among other things the following (i) generation forecasts; (ii) future performance targets; (iii) proposed efficiency improvement measures; (iv) saving in operating costs; (v) Plan for reduction in per unit/per MW cost of generation (vi) financial statements (which include balance sheet, profit and loss statement and cash flow statement) - current and projected (at least for the control period duration) along with basis of projections; (vii) any other new measure to be initiated by the Generating Company e.g. IT initiatives, third party energy audit, safety initiatives etc.

- 6.3 The Capital Investment Plan for transmission licensee shall be based on proposed generation capacity addition and future load forecasts of the state and should contain among other things the following: (i) future plans/ performance targets of the company including efficiency improvement measures proposed to be introduced (ii) plans for meeting reactive power requirements; (iii) plan for reduction in transmission losses; (iv) plan for improvement in quality of transmission service and reliability; (v) metering arrangements; (vi) Plan for reduction in per MW transmission cost, (vii) financial statements (which include balance sheet, profit and loss statement and cash flow statement)- current and projected (at least for the period of control period duration) along with basis of projections; (viii) any other new measure to be initiated by the Licensee e.g. IT initiatives, safety initiatives etc.

- 6.4 The Capital Investment plan for distribution licensee shall be based on sales forecast (MUs)/load growth and should contain among other things the following: (i) future plans/ performance targets of the company including efficiency improvement measures proposed to be introduced (ii) plan for reduction in distribution and non-technical losses;(iii) plan for improvement in quality of supply and reliability; (iv) metering arrangements; (v) plan for improvement in collection efficiency (vi) plan for improvement in consumer services/new consumer services (vii) Plan for reduction in O&M cost per MU of energy sales (viii) MIS; (ix) scheme for third party energy audit (x) plan for improvement in metering and billing; (xi) financial statements (which include balance sheet, profit and loss statement and cash flow statement)- current and projected (at least for the period of control period duration) along with basis of projections; (xii) any other new measure to be initiated by the Licensee(s) e.g. IT initiatives, development of distribution franchisee, periodical business satisfaction surveys, safety initiatives etc.
- 6.5 The capital investment plan shall be project/scheme wise and for each scheme/project shall include:
- a. Purpose of investment
  - b. Capital Structure;
  - c. Capitalization Schedule;
  - d. Financing Plan including identified sources of investment;
  - e. Details of physical parameters / targets;
  - f. Cost-benefit analysis and payback period;
  - g. Envisaged reduction in O&M cost/losses;
  - h. Ongoing projects that will spill into the year under review and new projects (along with justification) that will commence but may be completed within or beyond the control period.
- 6.6 The Capital Investment plan should be realistic in nature, the Capital Investment plan may be mainly of the following parts:
- A. Plans which will be implemented under some tied up schemes or funding has already been arranged
  - B. Capital Investments which will get covered by some upcoming schemes/expected funding
  - C. Other priority based investments required to be undertaken, but no scheme/funding is available for them.
- 6.7 Purpose of investment shall include:
- i. for a generation company - generation capacity growth, replacement of assets, renovation and modernization, reduction in average per unit cost of generation etc;
  - ii. for a transmission licensee - power evacuation, system augmentation, network expansion, replacement of assets, reduction in transmission losses, improvement in transmission service and reliability of supply, reduction in per MW transmission cost, IT related projects etc.
  - iii. for a distribution licensee - meeting load growth/ sales forecast (MUs), distribution loss reduction, non-technical loss reduction, replacement of assets, meeting reactive energy requirements, improvement in metering, consumer services, collection efficiency, quality and reliability of supply etc.

6.8 The capital investment plan, in case of a generation company, will be commensurate with generation capacity growth, renovation & modernization requirements etc.

In case of a transmission licensee, the capital investment plan will be commensurate with load/generation capacity growth and will be linked to improvement in quality of transmission service, reliability, metering and reduction in transmission losses.

The capital investment plan in case of a distribution licensee shall be commensurate with sales forecast (MUs) / load growth of the state, distribution/non-technical loss reduction targets, improvements envisaged in metering, collection efficiency, reliability and quality of supply etc.

6.9 Capital Investment for renovation and modernization in case of a transmission licensee and a generation company shall be made through an application with a detailed project report (DPR) elaborating the following elements: (i) Complete scope and justification; (ii) Estimated life extension of the generation/transmission asset; (iii) Improvement in performance parameters; (iv) Cost-benefit analysis; (v) Phasing of expenditure; (vi) Milestones/Time lines (vii) Schedule of completion; (viii) Estimated completion cost; (ix) Other aspects.

6.10 Capital investment plan shall incorporate list of schemes in order of priority so as to enable the Commission to approve the schemes in that order and in case lesser amount of capital expenditure is to be approved then the schemes of lower priority could be disapproved

6.11 The generation company and licensee shall submit all information / data required by the Commission for approval of the capital investment plan.

6.12 In the normal course, the Commission shall not revisit the approved capital investment plan during the control period. However, during the annual performance review and true-up, the Commission shall monitor the year wise progress of the actual capital expenditure incurred by the generating company or the licensee vis-à-vis the approved capital expenditure and in case of significant difference between the actual expenditure viz-a-viz the approved expenditure, the Commission may true up the capital expenditure, subject to prudence check, as a part of annual true up exercise or without an application to this effect by the generation company/licensee. The generating company and the licensee shall submit the scheme-wise actual capital expenditure incurred along with the annual performance review and true-up filing.

6.13 In case during execution of the project, the Capital Expenditure is estimated to cross 110% of the approved limit, the Licensee or company will need to take prior approval of the Commission before moving ahead with that expenditure.

6.14 In case during the annual performance review, large variations are observed in the actual cumulative capital expenditure incurred up to the current year starting from first year of the control period as against the approved capital expenditure, the Commission may revisit the costs incidental to the actual capital expenditure in the current year and remaining years of the control period.

Provided that the actual capital expenditure incurred shall be only for the schemes as per the approved capital investment plan.

Provided that if the actual capital expenditure incurred is more than the approved capital expenditure (whether at the time of MYT Order or separate approval before investment), the Commission may take appropriate decision at the time true-up of the cost incidental to such variations.



- 6.15 In case the capital expenditure is required for emergency work which has not been approved in the Capital Investment Plan, the licensee shall submit an application, containing all relevant information along with reasons justifying emergency nature of the proposed work, seeking approval by the Commission. The licensee shall take up the work prior to the approval of the Commission provided that the emergency nature of the scheme has been certified by its Board of Directors.
- 6.16 The generation company and the licensee shall submit all information / data as required by the Commission for necessary approval of the Capital Investment plan.

## **7 Forecast of Aggregate Revenue Requirement**

- 7.1 The applicant shall develop the forecast of Aggregate Revenue Requirement using the assumptions relating to the behavior of individual variables that comprise the Aggregate Revenue Requirement during the Control Period.

- 7.2 Forecast of expected revenue from tariff and charges

The applicant shall develop the forecast of expected revenue from tariff and charges based on the following:

- a) In the case of a Generating Company, estimates of expected energy generation and capacity allocated to Distribution Licensees and Open Access Customers for each financial year within the Control Period;
- b) In the case of a Transmission Licensee, estimates of transmission capacity allocated to Transmission System Users for each financial year within 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 financial year within the Control Period;
- d) In case of SLDC, estimates of allocated transmission capacity to users of intra State Transmission System for each financial year within the Control Period; and
- e) Prevailing tariff as at the date of making the application.

- 7.3 Based on the forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges, the Generating Company or Transmission Licensee or Distribution Licensee or SLDC shall submit the forecast of tariff, that would meet the gap, if any, in the Aggregate Revenue Requirement.

- 7.4 The applicant shall provide full details supporting the forecast, including but not limited to details of past performance, proposed initiatives for achieving efficiency or productivity gains, technical studies, contractual arrangements and/or secondary research, to enable the Commission to assess the reasonableness of the forecast.

- 7.5 On receipt of application, the Commission shall either-

- a) Issue an Order approving the tariff for the Control Period, subject to such modifications and conditions as it may specify in the said Order; or
- b) Reject the application for reasons to be recorded in writing, as the Commission may deem appropriate.

Provided that the applicant shall be given a reasonable opportunity of being heard before rejecting its application.

- 7.6 The Commission, in these Regulations, has specified the variables to be considered in the tariff determination of the applicant that shall be reviewed by the Commission as part of the Annual Performance Review in accordance with Regulation 9.

## 8 Specific trajectory for certain variables

- 8.1 The Commission shall stipulate a trajectory while approving the MYT Petition for certain variables having regard to the reorganization, restructuring and development of the electricity industry in the State.
- 8.2 Provided that the variables for which a trajectory may be stipulated include, but are not limited to,
- a) In case of Generating Stations:  
Generating station's availability, Station heat rate, secondary oil consumption, auxiliary consumption, Transit losses, etc.
  - b) In case of Transmission Licensee:  
Transmission losses, transmission system availability, etc.
  - c) In case of Distribution Licensee:  
Supply availability, wheeling availability, distribution losses, collection efficiency, etc.

## 9 Annual Performance Review and True Up

- 9.1 Where the aggregate revenue requirement and expected revenue from tariff and charges of a Generating Company or Transmission Licensee or Distribution Licensee or SLDC is covered under a Multi-Year Tariff framework, then such Generating Company or Transmission Licensee or Distribution Licensee or SLDC, as the case may be, shall be subject to an annual performance review and true up during the Control Period in accordance with this Regulation.
- 9.2 The Generating company, Transmission Licensee and the Distribution Licensee shall file an application for annual performance review of current year, true-up of previous year and tariff for the ensuing year not less than 120 days before the close of each year of the control period..
- Provided that the Generating Company or Transmission Licensee or Distribution Licensee or SLDC, as the case may be, submit to the Commission 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 as the Commission may require to assess the reasons for and extent of any variation in financial performance from the approved forecast of Aggregate Revenue Requirement and actual revenue from tariff and charges.
- Provided that the Petition for Truing Up shall be accompanied by Audited Annual Accounts, duly certified by the Statutory Auditor and CAG.  
Provided that the information sought by the Commission shall be submitted in the formats as prescribed by the Commission.
- 9.3 The scope of the Annual Performance review and True up shall be a comparison of the actual performance of the Generating Company or Transmission Licensee or SLDC or Distribution Licensee with the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges and shall comprise the following:
- a) **True Up:** a comparison of the audited performance of the applicant for the previous financial year with the approved forecast for that financial year and truing up of expenses and revenue in line with Regulation 10 of this regulation including pass through of gain/loss pertaining to controllable and uncontrollable items;

- b) **Annual Performance Review:** a comparison of the performance targets estimated to be achieved for the current financial year(based on 6 months actual data) with the approved forecast for that financial year including adjusting trajectories of uncontrollable if needed.
- c) Categorisation of variations in performance with reference to approved forecast into factors within the control of the applicant (controllable items) and those caused by factors beyond the control of the applicant (un-controllable items)  
Provided such categorization of the controllable and uncontrollable items shall be done in accordance with Regulation 10of this regulation.

9.4 Upon completion of the review, the Commission shall attribute any variations or expected variations in performance, for variables specified under Regulation 10 below, to factors within the control of the applicant (controllable items) or to factors beyond the control of the applicant (uncontrollable items):

Provided that any variations or expected variations in performance, for variables other than those specified under Regulation 10below, shall not be reviewed by the Commission during the Control Period and shall be attributed entirely to controllable items:

Provided however, that where the applicant or any interested or affected party believes, for any variable not specified under Regulation 10 below that there is a material variation or expected variation in performance, for any financial year, on account of uncontrollable items, such applicant or interested or affected party may apply to the Commission for inclusion of such variable, during the Annual Performance Review under Regulation 9.3 above for such financial year.

9.5 Upon completion of the True-Up and Annual Performance Review, the Commission shall pass an order recording-

- a) The approved aggregate gain or loss to the Generating Company or Transmission Licensee or Distribution Licensee or SLDC on account of controllable items and the amount of such gains or such losses that may be shared in accordance with Regulation 12;
- b) The approved modifications to the forecast of the Generating Company or Transmission Licensee or Distribution Licensee or SLDC for the ensuing financial year; and
- c) Revision of estimates for the ensuing financial year, if required, based on the audited financial results for the previous financial year.

## 10 Controllable and uncontrollable items

10.1 For the purpose of this regulation, the items of ARR shall be identified as 'controllable' or 'uncontrollable'. The variation on account of uncontrollable items shall be treated as a pass-through subject to prudence check/validation and approval by the Commission;

Provided that the Commission may allow variations in controllable items on account of Force Majeure events as pass-through in the ARR for the ensuing year based on actual values submitted by the generating company and licensees and subsequent validation and approval by the Commission during true-up.

Further provided that the Commission may allow variations in uncontrollable items as pass-through in the ARR for the ensuing year based on actual values submitted by the generating company and licensees and subsequent validation and approval by the Commission during true-up.

10.2 The items in the ARR shall be treated as 'controllable' or 'uncontrollable' as follows:

**Controllable Items**

ARR Element	Controllable
Availability	Controllable
Plant Load factor / Plant availability factor	Controllable
Heat Rate	Controllable
Auxiliary Energy Consumption	Controllable
Secondary Fuel Oil Consumption (SFC)	Controllable
O&M Expenses (excluding terminal liabilities with regard to employees on account of changes in pay scales or dearness allowance due to inflation)	Controllable
Depreciation	Controllable
Interest and Finance Charges	Controllable
Return on Equity	Controllable
Transit loss of coal	Controllable
Capital Expenditure	Controllable
Distribution Losses	Controllable
Collection Efficiency	Controllable
Intra State Transmission losses	Controllable
Quality of Supply	Controllable

**Uncontrollable Items**

ARR Element	Uncontrollable
Terminal liabilities with regard to employees on account of changes in pay scales	Uncontrollable
One-time expenses such as expense due to change in accounting policy & estimates, arrears paid due to revision of pay based on pay commission recommendations and interim relief etc.,	Uncontrollable
All statutory levies and taxes, if any excluding tax on Income	Uncontrollable
Fuel Price	Uncontrollable
Calorific Value of Fuel	Uncontrollable
Energy Sales	Uncontrollable
Power Purchase Price	Uncontrollable
Power Purchase Quantum (MUs)	Uncontrollable
Inter State Transmission losses	Uncontrollable
Non-Tariff income	Uncontrollable

**11 Mechanism for pass through of gains or losses on account of Uncontrollable items**

- 11.1 The approved aggregate gain or loss to the Generating Company or Transmission Licensee or Distribution Licensee or SLDC on account of uncontrollable items shall be passed through as an adjustment in the tariff of the Generating Company or Transmission Licensee or

Distribution Licensee or SLDC over such period as may be specified in the Order of the Commission passed under these Regulations.

- 11.2 The Generating Company or Transmission Licensee or Distribution Licensee or SLDC shall submit such details of the variation between expenses incurred and revenue earned and the figures approved by the Commission, in the prescribed format to the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission.
- 11.3 Nothing contained in this Regulation shall apply in respect of any gain or loss arising out of variations in the price of fuel and power purchase, which shall be dealt with as specified by the Commission from time to time.

## **12 Mechanism for pass through of gains or losses on account of Controllable items**

- 12.1 The approved aggregate gain to the Generating Company or Transmission Licensee or Distribution Licensee or SLDC on account of controllable items shall be dealt with in the following manner:
- a) One-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 9.5;
  - b) The balance amount, which will amount to two-third of such gain, may be utilised at the discretion of the Generating Company or Transmission Licensee or Distribution Licensee or SLDC.
- 12.2 The approved aggregate loss to the Generating Company or Transmission Licensee or Distribution Licensee or SLDC on account of controllable items 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; and
  - b) The balance amount of loss shall be absorbed by the Generating Company or Transmission Licensee or Distribution Licensee or SLDC.

## **13 Suo Motu**

- 13.1 The Commission shall, at all times, have the authority, either Suo-Motu or on a petition filed by any interested or affected party, to determine the Tariff, including terms and conditions thereof, of Generation Company, Transmission Licensee, SLDC and Distribution Licensees and shall initiate the process of such determination in accordance with the procedure as specified:

Provided that the proceedings for such determination of Tariff, including terms and conditions thereof, shall be in the same manner as set out in the AERC (Conduct of Business Regulations) 2004, as amended from time to time.

## CHAPTER 3: PROCEDURE FOR DETERMINATION OF TARIFF

### 14 Procedures relating to making an application for determination of Tariff

- 14.1 An application for determination of tariff shall be made in such form and in such manner as specified in this Regulation, and accompanied by such fees as may be specified under the AERC (Payment of Fees etc.) Regulations, 2015, as amended from time to time.
- 14.2 An application for determination of tariff for first year of the Control Period shall be made along with the Multi Year Tariff Petition for the Control Period under Regulation 7 and the Petition for determination of Tariff for subsequent years of the Control Period shall be made along with Petition for Annual Performance Review under Regulation 9.
- 14.3 The formats for furnishing information for calculating expected revenue and expenditure and for determining tariff shall be specified separately for Generation, Transmission, Distribution and SLDC charges. Information submitted in these formats should be accompanied by supporting documents/calculations and soft copies.
- 14.4 The proceedings to be held by the Commission for determination of tariff shall be in accordance with the AERC (Conduct of Business) Regulations, 2004, as amended from time to time.
- 14.5 Notwithstanding anything contained in these Regulations, the Commission shall at all times have the authority, either on suo-motu basis or on a Petition filed by any interested or affected Party, to determine the tariff, including terms and conditions thereof, of any Generating Company or Transmission Licensee or Distribution Licensee or SLDC:

Provided that such determination of tariff may be pursuant to an agreement or arrangement or otherwise whether or not previously approved by the Commission and entered into at any time before or after the commencement of the Act:

### 15 Review at the End of Control Period

- 15.1 At the end of the control period, the Commission shall review the achievement of objectives and implementation of the principles of MYT laid- down in these Regulations.
- 15.2 The end of the one control period may be the beginning of the next control period or as decided by the Commission. The Commission shall analyse the performance with respect to the targets set out at the beginning of the control period and shall determine the base value for the next control period, based on actual performance achieved, expected improvement and other relevant factors.

### 16 Determination of Generation Tariff

#### Existing Generating Station

- 16.1 Where the Commission has, at any time prior to the date of effect of these Regulations, 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 the Generating Company to the Distribution Licensee shall be in accordance with tariff mentioned in such

power purchase agreement or arrangement for such period as approved or adopted by the Commission.

- 16.2 Where, as at the date of effect of these Regulations, the power purchase agreement or arrangement between a Generating Company and a Distribution Licensee for supply of electricity from an existing generating Unit/Station has not been approved by the Commission or the tariff contained therein has not been adopted by the Commission or where there is no power purchase agreement or arrangement, then the supply of electricity by such Generating Company to the Distribution Licensee after the date of effectiveness of these Regulations shall be in accordance with a power purchase agreement approved by the Commission in accordance with Chapter 4 of these Regulations

Provided that an application for approval of such power purchase agreement or arrangement shall be made by the Distribution Licensee to the Commission within a period of three (3) 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, as the case may be, until such time as the Commission approves of such power purchase agreement and shall be discontinued forthwith if the Commission rejects, for reasons recorded in writing, such power purchase agreement or arrangement.

#### **New Generating Stations**

- 16.3 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 tariff as per power purchase agreement approved by the Commission, except if such power purchase agreement has been exempted from requiring such approval in accordance with Chapter 4 of these Regulations.

#### **Own Generating Stations**

- 16.4 Where the Distribution Licensee also undertakes the business of generation of electricity, the transfer price at which electricity is supplied by the Generation Business of the Distribution Licensee 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 Chapter 5 of these Regulations in determining the transfer price for such supply.

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

- 16.6 The Distribution Licensee shall submit, along with the separate application for determination of tariff for retail supply of electricity, the information required under Chapter 5 of these Regulations relating to the Generation Business,

- 16.7 Notwithstanding anything contained in this Regulation 16, the Commission shall adopt the tariff for supply of electricity by a Generating Company to a Distribution Licensee if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government:

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

**17 Determination of Tariff for Transmission, Distribution Wheeling Business, Retail Supply Business and SLDC**

17.1 The Commission shall determine the tariff for Transmission, Distribution Wheeling Business, Retail Supply Business and SLDC based on an application made by the Licensee in accordance with the procedure contained in this Regulation 17.

17.2 The Commission shall determine the tariff for -

- a. Transmission of electricity, in accordance with the terms and conditions contained in Chapter 7 of these Regulations;
- b. Distribution Wheeling Business, in accordance with the terms and conditions contained in Chapter 8 of these Regulations; and
- c. Retail Supply Business, in accordance with the terms and conditions contained in Chapter 9 of these Regulations.
- d. SLDC Business, in accordance with the terms and conditions contained in Chapter 10 of these Regulations.

17.3 The applicant shall provide as part of its application to the Commission, in such form as may be stipulated by the Commission from time to time, full details of its calculation of the Aggregate Revenue Requirement and expected revenue from tariff and charges pursuant to the terms of its license, and thereafter he shall furnish such further information or particulars or documents as the Commission or the Secretary or any Officer designated for the purpose by the Commission may reasonably require to assess such calculation

Provided that the application shall be accompanied where relevant, by a detailed tariff revision proposal showing category-wise tariff 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 specify additional/alternative formats for details to be submitted by the applicant, from time to time, as it may reasonably require for assessing the Aggregate Revenue Requirement and for determining the tariff.

17.4 Upon receipt of a complete application accompanied by all requisite information, particulars and documents in compliance with all the requirements specified in these Regulations, the application shall be deemed to be received and the Commission or the Secretary or the designated Officer shall intimate to the applicant that the application is ready for publication.

17.5 The applicant shall, within seven(7) days of an intimation given to him in accordance with Regulation 18.4, publish a notice, in at least two (2) English and two (2) Assamese language daily newspapers in English and Assamese language, respectively widely circulated in the area to which the application 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 further that the applicant shall also put up on its internet website, in downloadable spreadsheet format showing detailed computations, the application made to the Commission along with all regulatory filings, information, particulars and documents in the manner so stipulated by the Commission along with the public notice:

Provided further that the web-link to the information mentioned in the second proviso to Regulation 17.5 above shall be easily accessible, archived for downloading and shall be prominently displayed on the applicant's internet website:

Provided also that the applicant may not provide or put up any such information, particulars or documents, which are confidential in nature, with the prior approval of the Commission.



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 application.

- 17.6 The applicant 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 the Commission for determination of tariff.
- 17.7 The Commission may, if it considers necessary, make or cause to be made available to any person, at any time, such information as has been provided by the applicant to the Commission including abstracts of such books and records (or certified true copies thereof) on such terms and conditions as may be specified in the AERC (Conduct of Business) Regulations, 2004, as amended from time to time:
- 17.8 The procedural aspects pertaining to applications contained in this Regulation shall apply, only to such extent as may be required by the Commission having regard to the circumstances of an individual case, to -
- an application made by a Licensee under the proviso to sub-section (1) of Section 36 of the Act;
  - an application made by a Distribution Licensee under sub-section (5) of Section 64 of the Act.

## 18 Time limit for making an application for determination of Tariff

- 18.1 Generating company and the licensee shall adhere to the following schedule for various activities for the Control Period:

**Time Schedule for various activities for the Control Period**

S. No.	Description	Filing of the Document	Obtaining additional information and acceptance by the Commission	Approval of the Document by the Commission
1	Filing of MYT Petition (ARR and Tariff Proposal for the control period) along with Capital Investment Plan	By 30 <sup>th</sup> November of the year preceding the first year of the control period	Within 45 days of filing of document	Within 120 days of the admission of the petition
2	Annual Performance Review/ True-up	By 30 <sup>th</sup> November of each year of the control period	Within 45 days of filing of document	Within 120 days of admission of the petition

## 19 Tariff Order

- 19.1 The Commission shall, within one hundred and twenty (120) days from the receipt of a complete application & admission as per the AERC (conduct of Business) Regulations, 2004 & amendment if any and after considering all suggestions and objections received from the public under Section 64 of the Act:
- Issue a Tariff Order accepting the application with such modifications or such conditions as may be specified in that Order; or
  - Reject the application for reasons to be recorded in writing if such application is not in accordance with the provisions of the Act and the rules and Regulations made there under or the provisions of any other law for the time being in force:
- Provided that an applicant shall be given a reasonable opportunity of being heard before rejecting his application.

- 19.2 The tariffs so determined shall be in force from the date specified in the said Order and shall, unless amended or revoked, continue to be in force for such period as may be stipulated therein.

## **20 Publication of Approved Tariff**

- 20.1 The applicant shall within the time specified in the Order of the Commission, publish the salient features of the tariff approved by the Commission in at least two (2) English and two (2) Assamese language daily newspapers in English and Assamese language, respectively having wide circulation in the area of licensee and shall put up the approved tariff / tariff schedule on its internet website and make available for sale, a booklet containing such tariff or tariff, as the case may be, to any person upon payment of reasonable reproduction charges;

Provided that where the applicant is a Generating Company, the publication shall be in such newspapers as are 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 put up on the internet website of such Generation Company.

## **21 Communication of Tariff Order**

- 21.1 The Commission shall, within seven days of passing the Order, send a copy of the Order to the Government of Assam, the Central Electricity Regulatory Commission, the Central Electricity Authority, concerned licensees and generating company. The Commission shall also make available copy of the said Order to any person on payment of a fee fixed by the Commission.

## **22 Adherence to Tariff Order**

- 22.1 No tariff or part of any tariff may be ordinarily amended, more frequently than once in the year, except in respect of any changes expressly permitted under the terms of fuel and power purchase price adjustment as may be specified in under the AERC (Fuel and Power Purchase Price Adjustment Formula) Regulations, 2010 and Amendments if any, on account of fuel cost and power purchase cost.
- 22.2 The Commission, may, after satisfying itself for reasons to be recorded in writing, allow for the revision of tariff.
- 22.3 If any Generating Company or Transmission Licensee or Distribution Licensee or SLDC 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 base rate of the State Bank of India without prejudice to any other liability incurred by such Generating Company or Transmission Licensee or Distribution Licensee or SLDC.
- 22.4 The Generation Company or Transmission Licensee or Distribution Licensee or SLDC shall submit periodic information such as compliance to directives, etc. as may be directed by the Commission, containing operational and cost data to enable the Commission to monitor the implementation of its Order.

## CHAPTER 4: ELECTRICITY PURCHASE AND PROCUREMENT

### 23 Applicability

- 23.1 The Regulations contained in this Chapter shall apply to electricity purchase and 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.

### 24 Power procurement guidelines

- 24.1 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.
- 24.2 A Distribution Licensee shall follow the guidelines contained in this Chapter with respect to:
- a. Procurement of power under any arrangement or agreement with a term or duration exceeding seven (7) years (i.e., long-term power procurement);
  - b. Procurement of power under any arrangement or agreement with a term or duration exceeding three (3) months but not exceeding five 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 (1) month at a time (i.e., short-term power procurement).

### 25 Power procurement plan

- 25.1 The Distribution Licensee shall prepare a plan for procurement of power to serve the demand for electricity in its area of supply for the Control Period 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 of the first year of the respective Control Period.

Provided further that the power procurement plan shall be submitted along with the application for determination of tariff, in accordance with Chapter 2 of these Regulations.

Provided that the power procurement plan submitted by the Distribution Licensee may include long-term, medium-term and short-term power procurement sources of power, in accordance with these Regulations.

- 25.2 The power procurement plan of the Distribution Licensee shall comprise of the following:
- a. A quantitative forecast of the unrestricted demand for electricity for each tariff category, within its area of supply over the Control Period;
  - b. An estimate of the quantities of electricity supply from the identified sources of generation and power purchase;
  - c. An estimate of availability of power to meet the base load and Peak load requirement.
  - d. Standards to be maintained with regard to quality and reliability of supply, in accordance with the AERC (Distribution Licensees' Standards of Performance) Regulations, 2004, as amended from time to time;
  - e. Measures proposed to be implemented as regards energy conservation and energy efficiency;

- f. The requirement for new sources of power generation and/or procurement, including augmentation of generation capacity and identified new sources of supply, based on (a) to (d) above;
- g. The plan for procurement of power including quantities and cost estimates for such procurement:  
 Provided that the forecast/estimate contained in the long-term procurement plan shall be stated for each year of the Control Period, in terms of quantities of power to be procured (in millions of units of electricity) and maximum demand (in MW / MVA):  
 Provided further that the forecasts/estimates shall be prepared for each month over the Control Period:  
 Provided also that the long-term procurement plan shall be a cost-effective plan based on available information regarding costs of various sources of supply.
- h. Short-term power procurement proposed shall be in accordance with Regulation 27 of these Regulations.
- 25.3 The forecasts/ estimates shall be prepared using forecasting techniques based on past data and reasonable assumptions regarding the future:  
 Provided that the forecasts/estimates shall take into account factors such as overall economic growth, consumption growth of electricity-intensive sectors, advent of competition in the electricity industry, trends in captive power, impact of loss reduction initiatives, improvement in Generating Station Plant Load Factors and other relevant factors.
- 25.4 Where the Commission has stipulated a percentage of the total consumption of electricity in the area of a Distribution Licensee to be purchased from co-generation and renewable sources of energy, the power procurement plan of such Distribution Licensee shall include the plan for procurement from such sources at least upto the stipulated level.
- 25.5 The Distribution Licensee shall be required to forward a copy of the 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 AERC (Terms and Conditions for Open Access) Regulations, 2005, as amended from time to time;  
 Provided that the Distribution Licensee may 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.
- 25.6 The Distribution Licensee may, as a result of additional information not previously known or available to him at the time of submission of the procurement plan under Regulation 25.1, apply for a modification in the power procurement plan, for the remainder of the Control Period, as part of the application for Annual Performance Review under Regulation 9.  
 Provided that the Distribution Licensee may be allowed a modification of the power procurement plan under this Regulation not more than once in a financial year, i.e., during the Annual Performance Review.
- 25.7 The Commission may, as a result of additional information not previously known or available to the Commission at the time of submission of the procurement plan under Regulation 25.1, if it so deems, either on suomotu basis or on an application made by any interested or affected party, modify the procurement plan of the Distribution Licensee, for the remainder of the Control Period, as part of the Annual Performance Review.  
 Provided that the Commission may modify the power procurement plan under this Regulation as and when required.

- 25.8 The Commission shall review the power procurement plan of the Distribution Licensee, or any proposed modification thereto, and upon such review being completed, the Commission shall either-
- a. issue an order approving the power procurement plan, or modifications thereto, subject to such modifications and conditions as it may deem appropriate; or
  - b. reject the power procurement plan or application for modification thereto, for reasons recorded in writing, if such plan is not in accordance with the guidelines contained in this Chapter, and direct the Distribution Licensee to submit a revised plan based on such considerations as it may specify:  
Provided that the Distribution Licensee shall be given reasonable opportunity of being heard before rejecting its power procurement plan.

## **26 Approval of power purchase agreement/arrangement**

- 26.1 Every agreement or arrangement for power procurement by a Distribution Licensee from a Generating Company or Licensee or from other source of supply entered into after the date of effect of these Regulations shall come into effect only with the prior approval of the Commission.

Provided that the prior approval of the Commission shall be required in respect of any agreement or arrangement for power procurement by the Distribution Licensee from a Generating Company or Licensee or from any other source of supply on a standby basis:

Provided further that the prior approval of the Commission shall also be required for any change to an existing arrangement or agreement for power procurement, whether or not such existing arrangement or agreement was approved by the Commission.

- 26.2 The Commission shall review an application for approval of power procurement agreement/arrangement having regard to the approved power procurement plan of the Distribution Licensee and the following factors:
- a. Requirement for 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;
  - c. Adherence to the terms and conditions for determination of tariff specified under Chapter 5 of these Regulations where the process specified in (b) above has not been adopted;
  - d. Availability (or expected availability) of capacity in the intra-State transmission system for evacuation and supply of power procured under the agreement/arrangement;
  - e. Need to promote co-generation and generation of electricity from renewable sources of energy.
- 26.3 Where the terms and conditions specified under Chapter 5 of these Regulations are proposed to be adopted, the approval of the power purchase agreement between a Generating Company and a Distribution Licensee for supply of electricity from a new Generating Station may comprise of two steps, at the discretion of the applicant:
- a. Approval of a provisional tariff, on the basis of an application made to the Commission at any time prior to the application made under clause (b) below; and
  - b. Approval of the final tariff, on the basis of an application made not later than three (3) months from the cut-off date.

**27 Additional Short-term power procurement**

27.1 The Distribution Licensee can undertake additional short-term 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.

27.2 Where there has been a shortfall or failure in the supply of electricity from any approved source of supply during the financial year, the Distribution Licensee may enter into additional short-term arrangement or agreement for procurement of power (short-term means upto period of one year):

Provided that if the total power purchase cost for any block of six months including such short-term power procurement exceeds 105% of the power purchase cost approved by the Commission for the respective block of six months, the Distribution Licensee shall have to obtain prior approval of the Commission; and

Provided that the proposed short-term power procurement shall be in accordance with the AERC (Fuel and Power Purchase Price Adjustment Formula) Regulations, 2010 and amendments thereof.

27.3 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, the Distribution Licensee may enter into a short-term power procurement agreement or arrangement with such supplier without the prior approval of the Commission.

27.4 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 State Load Despatch Centre to prevent grid failure.

27.5 Within fifteen (15) 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 provide the Commission, full details of such agreement or arrangement, including quantum, tariff calculations, duration, supplier details, method for supplier selection and such other details as the Commission may require with regard to such agreement/arrangement to assess that the conditions specified in this Regulation 27 have been complied with:

Provided that where the Commission has reasonable grounds to believe that the arrangement or agreement entered into by the Distribution Licensee does not meet the criteria specified in Regulation 27.2 to Regulation 27.4 above, the Commission may disallow any increase in the total cost of power procurement (net of additional revenue) over the approved level arising there from or any loss incurred by the Distribution Licensee as a result, from being passed through to consumers.

27.6 Subject to the cases specified in Regulation 27.2 to Regulation 27.4 above, where the Distribution Licensee enters into any agreement or arrangement for short-term power procurement without the approval of the Commission, any increase in the total cost of power procurement (net of additional revenue) over the approved level arising there from shall be deemed to be a variation in performance attributable entirely to controllable factors.

## CHAPTER 5: FINANCIAL PRINCIPLES

### 28 Capital Cost and capital structure

28.1 Capital cost for a project shall include:

- a) the expenditure incurred or projected to be incurred upto the date of commercial operation of the project, any gain or loss on account of foreign exchange risk variation on the loan during construction up to the date of commercial operation of the project, as admitted by the Commission, after prudence check
- b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed
- c) Increase in cost in contract packages as approved by the Commission;
- d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 29.7 of these regulations
- e) capitalised initial spares subject to the ceiling rates specified in this Regulation; and
- f) additional capital expenditure or de-capitalization determined under Regulation 29
- g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 44 of these regulations; and
- h) Adjustment of any revenue earned by the transmission licensee by using the assets before COD.
- i) the capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019
- j) expenditure on account of renovation and modernization as admitted by this Commission in accordance with regulation 29.5

Provided that the cost of the common assets forming part of the project, should be considered based on the suitable allocation and such allocated cost shall form part of the capital cost:

Provided that the assets forming part of the project, but not in use, shall be taken out of the capital cost:

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

Provided that where the Power Purchase Agreement entered into between the Generating Company and the Distribution Licensee provides a ceiling of actual expenditure, the original cost of project shall not exceed such ceiling for the purpose of these Regulations:

Provided further that prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, 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 in case of the existing Generating Stations, the capital cost of the project as admitted by the Commission prior to date of effectiveness of these Regulations and the additional capital expenditure projected to be incurred and capitalised, as may be admitted by the Commission, shall form the basis for determination of tariff.

Provided also that in case the site of a Hydro Generating Station is awarded to a developer (not being a State controlled or owned company) by the State Government by following a transparent process of bidding, any expenditure incurred or committed to be incurred

including the premium payable to the State Government by the project developer for getting the project site allotted, shall not be included in the capital cost:

Provided also that the capital cost in case of such hydro Generating Station shall include:

- a) cost of approved Rehabilitation and Resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
- b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) project in the affected area.

28.3 The approved Capital Cost shall be considered for determination of tariff and if sufficient justification is provided for any escalation in the Project Cost, the same may be considered by the Commission subject to the prudence check:

Provided that in case the actual capital cost is lower than the approved capital cost, then the actual capital cost shall be considered for determination of tariff of the Generating Company or Transmission Licensee or Distribution Licensee or SLDC.

28.4 The actual capital expenditure on COD for the original scope of work based on audited accounts of the Company limited to original cost may be considered subject to the prudence check by the Commission.

28.5 The capital cost may include initial spares which shall be capitalized as a percentage of the Plant and Machinery cost upto the cut-off date, subject to the following ceiling norms:

- a. Coal-based fired thermal generating stations – 4.0%
- b. Gas Turbine/Combined Cycle thermal generating stations – 4.0%
- c. Hydro generating stations including pumped storage hydro generating station – 4.0%
- d. Transmission system
  - i. Transmission line – 1.0%
  - ii. Transmission Sub-station (Green Field) – 4.0%
  - iii. Transmission Sub-station (Brown Field) – 6.0%
  - iv. Series Compensation devices and HVDC Station – 4.0%
  - v. Gas Insulated Sub-station (GIS) – 5.0%
  - vi. Communication System – 3.5%

Provided that:

Where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply till the exclusion of the norms specified above:

where the generating station has any transmission equipment forming part of the generation project, the ceiling norms for initial spares for such equipments shall be as per the ceiling norms specified for transmission system under these regulations:

once the transmission project is commissioned, the cost of initial spares shall be restricted on the basis of plant and machinery cost corresponding to the transmission project at the time of truing up:

for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the break up of head wise IDC & IEDC in its tariff application.

28.6 Scrutiny of the cost estimates by the Commission shall be limited to the reasonableness of the capital cost, financing plan, interest during construction, use of efficient technology, and such other matters for determination of tariff.



- 28.7 Any expenditure on replacement, renovation and modernization or extension of life of old fixed assets, as applicable to Generating Companies, Transmission Licensees, Distribution Licensees and SLDC, shall be considered after writing off the net value of such replaced assets from the original capital cost and shall be calculated as follows:

Net Value of Replaced Assets = OCFA – AD; Where; OCFA: Original Capital Cost of Replaced Assets; AD: Accumulated depreciation pertaining to the Replaced Assets.

- 28.8 The capital cost with respect to thermal generating station, incurred or projected to be incurred on account of the Perform, Achieve and Trade (PAT) scheme of Government of India will be considered by the Commission on case to case basis and shall include:

- a) cost of plan proposed by developer in conformity with norms of PAT Scheme; and
- b) sharing of the benefits accrued on account of PAT Scheme.

- 28.9 The following shall be excluded or removed from the capital cost of the existing and new project:

- a) The assets forming part of the project, but not in use;
- b) Decapitalisation of Asset;
- c) In case of hydro generating station 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 two stage transparent process of bidding; and
- d) the proportionate cost of land which is being used for generating power from generating station based on renewable energy:

Provided that any 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 shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation;

## 29 Additional capitalization and de-capitalization

- 29.1 The following 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 the prudence check.

- a. Undischarged liabilities recognized to be payable at a future date;
- b. Works deferred for execution;
- c. Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 28.5;
- d. Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- e. Change in law or compliance of any existing law:

Provided that the details of works asset wise/work wise 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 application for determination of tariff.

- 29.2 The capital expenditure incurred or projected to be incurred in respect of the 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:

- a. Liabilities to meet award of arbitration or for compliance of the order or decree of a court;

- b. Change in law or compliance of any existing law;
  - c. Deferred work relating to ash pond or ash handling system in the original scope of work.
  - d. 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.
- 29.3 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 after the cut-off date, may be admitted by the Commission, subject to prudence check:
- a. Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;
  - b. Change in law or compliance of any existing law;
  - c. Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;
  - d. Deferred works relating to ash pond or ash handling system in the original scope of work;
  - e. 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.;
  - f. Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;
  - g. Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal/lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;
  - h. In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;
  - i. In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and
  - j. Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialisation of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station;

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought

after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2019:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal based station shall be met out of compensation allowance:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.

- 29.4 In case of de-capitalization of assets of a generating company, SLDC, transmission licensee or distribution licensee, as the case may be, the original cost of such asset as on the date of decapitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place, duly taking into consideration the year in which it was capitalised.

**29.5 Renovation & Modernisation:**

- i. The generating company or the transmission licensee, as the case may be, for meeting the expenditure on renovation and modernization (R&M) for the purpose of extension of life beyond the useful life of the generating station or a unit thereof or the transmission system, shall make an application before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, record of consultation with beneficiaries and any other information considered to be relevant by the generating company or the transmission licensee:

Provided that in case of coal fired thermal generating station, the generating company, may, in its discretion, avail of a 'special allowance' in accordance with the norms specified in clause 30.6, as compensation for meeting the requirement of expenses including renovation and modernisation beyond the useful life of the generating station or a unit thereof, and in such an event revision of the capital cost shall not be considered and the applicable operational norms shall not be relaxed but the special allowance shall be included in the annual fixed cost:

Provided also that such option shall not be available for a generating station or unit for which renovation and modernization has been undertaken and the expenditure has been admitted by the Commission before commencement of these regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms.

- ii. Where the generating company or the transmission licensee, as the case may be, makes an application for approval of its proposal for renovation and modernisation, the approval shall be granted after due consideration of reasonableness of the cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission.
- iii. In case of gas/ liquid fuel based open/ combined cycle thermal generating station, any expenditure which has become necessary for renovation of gas turbines/steam turbine after 25 years of operation from its COD and an expenditure necessary due to obsolescence or non-availability of spares for efficient operation of the stations shall be allowed :

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

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

#### **29.6 Special Allowance for Coal-based fired Thermal Generating station**

- i. In case of coal fired thermal generating station, the generating company, instead of availing R&M may opt to avail a „special allowance“ in accordance with the norms specified in this regulation, as compensation for meeting the requirement of expenses including renovation and modernisation beyond the useful life of the generating station or a unit thereof, and in such an event, revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the special allowance shall be included in the annual fixed cost:

Provided that such option shall not be available for a generating station or unit for which renovation and modernization has been undertaken and the expenditure has been admitted by the Commission before commencement of these regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms.

- ii. The Special Allowance shall be @ Rs. 8.5 lakh/MW/year for the year 2016-17 and thereafter escalated @ 6.35% every year during the control period, unit wise from the next financial year from the respective date of the completion of useful life with reference to the date of commercial operation of the respective unit of generating station:

Provided that in respect of a unit in commercial operation for more than 25 years as on 1.4.2016, this allowance shall be admissible from the year 2016-17:

- iii. In the event of granting special allowance by the Commission, the expenditure incurred or utilized from special allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission as and when directed to furnish details of such expenditure.

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#### **29.7 Interest during construction (IDC), Incidental Expenditure during Construction (IEDC)**

##### **A. Interest during Construction (IDC):**

- i. Interest during construction shall be computed corresponding to the loan from the date of infusion of debt fund, and after taking into account the prudent phasing of funds upto SCOD.
- ii. In case of additional costs on account of IDC due to delay in achieving the SCOD, the generating company or the transmission licensee as the case may be, shall be required to furnish detailed justifications with supporting documents for such delay including prudent phasing of funds:

Provided that if the delay is not attributable to the generating company or the transmission licensee as the case may be, and is due to uncontrollable factors, IDC may be allowed after due prudence check:

Provided further that only IDC on actual loan may be allowed beyond the SCOD to the extent, the delay is found beyond the control of generating company or the transmission licensee, as the case may be, after due prudence and taking into account prudent phasing of funds.

**B. Incidental Expenditure during Construction (IEDC):**

- i. Incidental expenditure during construction shall be computed from the zero date and after taking into account pre-operative expenses upto SCOD:

Provided that any revenue earned during construction period up to SCOD on account of interest on deposits or advances, or any other receipts may be taken into account for reduction in incidental expenditure during construction.

- ii. In case of additional costs on account of IEDC due to delay in achieving the SCOD, the generating company or the transmission licensee as the case may be, shall be required to furnish detailed justification with supporting documents for such delay including the details of incidental expenditure during the period of delay and liquidated damages recovered or recoverable corresponding to the delay:

Provided that if the delay is not attributable to the generating company or the transmission licensee, as the case may be, and is due to uncontrollable factors, IEDC may be allowed after due prudence check:

Provided further that where the delay is attributable to an agency or contractor or supplier engaged by the generating company or the transmission licensee, the liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost.

- iii. In case the time over-run beyond SCOD is not admissible after due prudence, the increase of capital cost on account of cost variation corresponding to the period of time over run may be excluded from capitalization irrespective of price variation provisions in the contracts with supplier or contractor of the generating company or the transmission licensee.

**30 Treatment of Consumer contribution, Deposit work and Grant**

30.1 The following nature of work carried out by the Transmission Licensee or Distribution Licensee shall be classified under this category:

- a. Works after obtaining a part or all of the funds from the users in the context of deposit works.
- b. Capital works undertaken by utilising grants received under various schemes / programs of the State and Central Governments.
- c. Any other grant of similar nature and such amount received without any obligation to return the same and with no interest costs attached to such subvention.

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

- a. Normative O&M expense as specified in these Regulations shall be allowed.
- b. Provisions related to Depreciation, as specified in Regulation 32.
- c. Provisions related to Return on Equity Capital, as specified in Regulation 33.

### 31 Debt-equity ratio

- 31.1 For a project declared under commercial operation on or after April 1, 2019, 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, Transmission Licensee and Distribution Licensee.

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

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

Explanation.- The premium, if any, raised by the Generating Company or the Transmission Licensee or the Distribution Licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, 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.

- 31.2 In case of the Generating Company, Transmission Licensee, Distribution Licensee and SLDC, if any fixed asset is capitalised on account of capital expenditure prior to April 1, 2019, debt-equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2019 shall be considered:

Provided that in case of retirement or replacement of the assets, the equity capital approved as mentioned above, shall be reduced to the extent of 30% (or actual equity component based on documentary evidence, if it is lower than 30%) of the original cost of the retired or replaced asset.

- 31.3 Any expenditure incurred or projected to be incurred on or after April 1, 2019, 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.

### 32 Depreciation

- 32.1 The value base for the purpose of depreciation shall be the Capital Cost of the asset admitted by the Commission.

Provided that depreciation shall not be allowed on assets funded through Consumer contribution and Capital Subsidies/Grants.

- 32.2 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

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

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

32.4 Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these Regulations:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

32.5 In case of the existing projects, the balance depreciable value as on April 1, 2019, shall be worked out by deducting the cumulative depreciation including Advance Against Depreciation as admitted by the Commission upto March 31, 2019, from the gross depreciable value of the assets.

32.6 Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

32.7 In case of de-capitalization of assets, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.

### **33 Return on Equity Capital**

33.1 Return on equity capital shall be computed on the equity capital determined in accordance with Regulation 31

33.2 Return on equity shall be computed at the rate of 15.5% for Generating Stations, Transmission Licensee and SLDC and at the rate of 16.00% for Distribution Licensee on a post-tax basis.

### **34 Interest on loan capital**

34.1 The loans arrived at in the manner indicated in Regulation 31 shall be considered as gross normative loan for calculation of interest on loan.

Provided that in case of retirement or replacement of assets, the loan capital approved as mentioned above, shall be reduced to the extent of 70% (or actual loan component based on documentary evidence, if it is higher than 70%) of the original cost of the retired or replaced assets.

34.2 The normative loan outstanding as on April 1, 2019, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2019, from the gross normative loan.

34.3 The repayment for each year of the Control period shall be deemed to be equal to the depreciation allowed for that year:

- 34.4 Notwithstanding any moratorium period availed by the Generating Company or the Transmission Licensee or the Distribution Licensee or the SLDC, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.
- 34.5 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the Generating Company or the Transmission Licensee or the Distribution Licensee or SLDC:
- Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:
- Provided further that if the Generating Company or the Transmission Licensee or the Distribution Licensee or SLDC, as the case may be, does not have actual loan, then the weighted average rate of interest of the Generating Company or the Transmission Licensee or the Distribution Licensee or SLDC as a whole shall be considered.
- 34.6 The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.
- 34.7 The utility 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 the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.
- 34.8 The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.
- 34.9 Interest shall be allowed on the amount held as security deposit by the Distribution Licensee from consumers, at a rate equal to SBI base rate as on 1<sup>st</sup> April of the financial year plus one percent.

### **35 Tax on Income**

- 35.1 Income Tax, if any, on the income stream of the regulated business of Generating Companies, Transmission Licensees, Distribution Licensees and SLDC shall be reimbursed to the Generating Companies, Transmission Licensees, Distribution Licensees and SLDC as per actual income tax paid, based on the documentary evidence submitted at the time of truing up of each year of the Control Period, subject to the prudence check.

Provided that no Income Tax shall be considered on the amount of efficiency gains and incentive earned by the Generating Companies, Transmission Licensees, Distribution Licensees and SLDC.

### **36 Interest on Working Capital**

- 36.1 Generation projects

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

- (i) Cost of coal for one and half months (1½) for pit-head Generating Stations and two (2) months for non-pit-head Generating Stations, corresponding to target availability;



- (ii) Cost of secondary fuel oil for two (2) months corresponding to target availability;
  - (iii) Operation and Maintenance expenses for one (1) month;
  - (iv) Maintenance spares @20% of operation and maintenance expenses; and
  - (v) Receivables equivalent to two (2) months of capacity charges and energy charges for sale of electricity calculated on target availability;
- b) In case of Gas Turbine/Combined Cycle/ Gas-engine based Generating Stations, working capital shall cover:
- (i) Fuel cost for one (1) month corresponding to target availability duly taking into account the mode of operation of the Generating Station on gas fuel and / or liquid fuel;
  - (ii) Liquid fuel stock for fifteen (15) days corresponding to target availability subject to required storage availability;
  - (iii) Operation and maintenance expenses for one (1) month;
  - (iv) Maintenance spares @ 30% of operation and maintenance expenses; and
  - (v) Receivables equivalent to two (2) months of capacity charges and energy charges for sale of electricity calculated on target availability,
- c) In case of Hydro power Generating Stations including pumped storage hydro-electric generating station, working capital shall cover:
- (i) Operation and maintenance expenses for one (1) month;
  - (ii) Maintenance spares @15% of operation and maintenance expenses; and
  - (iii) Receivables equivalent to two (2) months of the annual fixed charges.
- d) Rate of interest shall be at interest rate equivalent to the normative interest rate of three hundred (300) basis points above the average State Bank of India MCLR (One Year Tenor) prevalent during the last available six months for the determination of tariff.

### 36.2 Transmission & SLDC

- a) The Transmission Licensee and SLDC shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:
- i. Operation and maintenance expenses for one (1) month;
  - ii. Maintenance spares @15% of operation and maintenance expenses; and
  - iii. Receivables equivalent to two (2) months of the annual transmission charges.
- b) Rate of interest shall be at interest rate equivalent to the normative interest rate of three hundred (300) basis points above the average State Bank of India MCLR (One Year Tenor) prevalent during the last available six months for the determination of tariff.

### 36.3 Distribution Wheeling Business

- a) The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Distribution Wheeling Business for the financial year, computed as follows:
- i. One month of the amount of Operation and Maintenance expenses for such financial year; plus
  - ii. Maintenance Spares @15% of operation and maintenance expenses; plus

- iii. Receivables equivalent to two (2) months of the expected revenue from charges for use of Distribution Wires; minus
- iv. Amount held as security deposits from Distribution System Users.
- b) Rate of interest shall be at interest rate equivalent to the normative interest rate of three hundred (300) basis points above the average State Bank of India MCLR (One Year Tenor) prevalent during the last available six months for the determination of tariff.
- c) Interest shall be allowed on the amount held as security deposit by the Distribution Licensee from Distribution System Users, at the rate equal to SBI base rate as on 1st April of the financial year

#### 36.4 Retail Supply of Electricity

- a) The Distribution Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:
  - a. One month of the amount of Operation and Maintenance expenses for such financial year (**O & M<sub>1</sub>**); plus
  - b. Maintenance Spares @15% of operation and maintenance expenses (**MS**); plus
  - c. Two (2) months equivalent of the expected revenue from sale of electricity at the prevailing tariff (**R<sub>2</sub>**);

minus

  - d. Amount held as security deposits under clause (a) and clause (b) of sub-section (1) of Section 47 of the Act from retail supply consumers (**SD**);

minus

  - e. One (1) month equivalent of cost of power purchased, based on the annual power procurement plan (**PP<sub>1</sub>**).

Thereby, total working capital considered shall be:

$$WC = (O \& M_1 + MS + R_2) - SD - PP_1$$

- b) Rate of interest shall be at interest rate equivalent to the normative interest rate of three hundred (300) basis points above the average State Bank of India MCLR (One Year Tenor) prevalent during the last available six months for the determination of tariff.
- c) Interest shall be allowed on the amount held as security deposit by the Distribution Licensee from consumers, at the rate equal to SBI base rate as on 1st April of the financial year plus one percent.

### 37 Operation and Maintenance Expense

37.1 The O&M for generating company and transmission licensee shall be determined as per Regulation 50 and Regulation 66.5 of these Regulations.

37.2 The O&M Expense for the Distribution licensee shall be determined as follows:

- a. The licensee shall propose separate trajectories of norms for each of the components of O&M expenses viz., employee cost, R&M expense and A&G expense;
- b. Norms shall be defined in terms of combination of number of personnel for various activities such as per 1000 consumers and number of personnel per substation, line length along with annual expenses per personnel for Employee expenses combination of A&G expense per personnel and A&G expense per 1000 consumers for A&G expenses and R&M expense as percentage of gross fixed assets for estimation of R&M expenses;
- c. One-time expenses such as expense due to change in accounting policy, arrears paid due to pay commissions and interim relief etc., shall be excluded from the norms in the trajectory;

- d. The expenses beyond the control of the distribution licensee such as dearness allowance, pension liabilities and terminal benefits in Employee cost etc., shall be excluded from the norms in the trajectory;
- e. The One-time expenses and the expenses beyond the control of the Distribution Licensee as per sub-regulations (c) and (d) above shall be allowed by the Commission over and above normative Operation & Maintenance Expenses after prudence check;
- f. The norms in the trajectory shall be proposed over the control period with due consideration to productivity improvements and commercial viability;
- g. The norms shall be proposed at constant prices of base year and escalation on account of inflation shall be over and above the baseline;
- h. The Distribution Licensee shall also carry out absolute and relative analysis while proposing the norms;
- i. In absolute analysis, Distribution Licensee's audited accounts of operations for last three years, expenses claimed for control period, historically approved cost, and prudence check shall be used by the Commission to estimate values of norms;
- j. In relative analysis, performance parameters of other Distribution Licensees within the same state or in other states shall be considered by the commission to estimate norms:  
Provided that other Distribution Licensees so chosen shall have similar profile as that of the Distribution Licensee under consideration in terms of consumer mix, type of license area (city, state, etc.) type of distribution networks, viz, underground/overhead, HT-LT ratio, etc;
- k. Suitable average of outcomes of absolute and relative analysis may be taken by the licensee while proposing the norms over the control period for the distribution licensee;
- l. Based on the proposal submitted by the licensee, the Commission shall fix the norms for the said purposes which shall be taken into account for determining the trajectories for various components of O&M expenses for the remaining years of the control period;
- m. Till such time the norms are fixed by the Commission, the trajectories of various components of O&M expenses shall be submitted by the licensee and determined by the Commission on the basis of the actual costs for the previous years in accordance with the provisions of these regulations;

37.3 In absence of any proposal along with supporting documents, the Commission shall determine the O&M for the Wheeling and Retail Supply business as per the methodology provided below:

- a. Operation and Maintenance (O&M) expenses shall comprise of the following
  - i. Salaries, wages, pension contribution and other employee costs;
  - ii. Administrative and general expenses including insurance charges if any;
  - iii. Repairs and maintenance expenses;
- b. The O&M expenses for the first year of the Control Period shall be approved by the Commission taking into account the actual O&M expenses for last five years till Base Year subject to prudence check and any other factors considered appropriate by the Commission.
- c. The O&M expenses for the nth year and also for the year immediately preceding the Control Period, shall be approved based on the formula given below:-

$$O\&M_n = R\&M_n + EMP_n + A\&G_n$$

Where –

- $O\&M_n$  – Operation and Maintenance expense for the nth year;
  - $EMP_n$  – Employee Costs for the nth year;
  - $R\&M_n$  – Repair and Maintenance Costs for the nth year;
  - $A\&G_n$  – Administrative and General Costs for the nth year;
- d. The above components shall be computed in the manner specified below:

$$EMP_n = (EMP_{n-1}) \times (1+G_n) \times (1+CPIinflation)$$

$$R\&M_n = K \times (GFA_{n-1}) \times (1+WPIinflation) \text{ and}$$

$$A\&G_n = (A\&G_{n-1}) \times (1+WPIinflation) + \text{Provision}$$

Where -

- $EMP_{n-1}$  – Employee Costs for the (n-1)th year;
- $A\&G_{n-1}$  – Administrative and General Costs for the (n-1)th year;
- Provision: Cost for initiatives or other one-time expenses as proposed by the Distribution Licensee and validated by the Commission.
- 'K' is a constant specified by the Commission in %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;
- CPIinflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;
- WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;
- $GFA_{n-1}$  --- Gross Fixed Asset of the transmission licensee for the n-1th year;
- $G_n$  is a growth factor for the nth year. Value of  $G_n$  shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on licensee's filings, benchmarking, and any other factor that the Commission feels appropriate.

### 38 Prior Period Expenses

- 38.1 The utility may submit to the Commission the prior period expenses as a part of the filing for truing up;
- 38.2 The Commission may allow prior period expenses for uncontrollable cost items only as per the audited accounts during truing up subject to prudence check.

## CHAPTER 6: COMPONENTS OF ARR AND TARIFF FOR GENERATION COMPANY

### 39 Applicability

39.1 The Regulations specified in this Chapter shall apply for determining the tariff for supply of electricity to a Distribution Licensee from the generating stations located in Assam:

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 as stipulated in the relevant Regulations/Orders of the Commission.

39.2 The Commission shall be guided by the terms and conditions contained in this Chapter 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 effectiveness of these Regulations; or where such tariff is pursuant to a power purchase agreement or arrangement entered into prior to the date of effectiveness of these Regulations and either the Commission has not previously approved such agreement/arrangement or the agreement/arrangement envisages that the tariff shall be based on the Assam Electricity Regulatory Commission (Terms and Conditions for determination of Multi Year Tariff) Regulations, 2015, as amended from time to time; or
- b) 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:

Provided that the Commission may deviate from the norms contained in this Chapter or specify alternative norms for particular cases, where it so deems appropriate, having regard to the circumstances of the case:

Provided further that the reasons for such deviation(s) shall be recorded in writing.

39.3 Notwithstanding anything contained in this Chapter 6, the Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government.

### 40 Petition for determination of generation tariff

40.1 A Generating Company is required to file a Petition for determination of tariff for supply of electricity to Distribution Licensees in accordance with the provisions of Chapter 3 of these Regulations.

40.2 Tariff in respect of a Generating Station under these Regulations may be determined Stage-wise, Unit-wise or for the whole Generating Station. The terms and conditions for determination of tariff for Generating Stations specified in this Chapter shall apply in like manner to Stages or Units or for the Generating Station, as the case may be;

40.3 Where the tariff is being determined for 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 application for determination of tariff.

- 40.4 A Generating Company may make a Petition for determination of provisional tariff in advance of the anticipated Date of Commercial Operation of Unit or Stage or Generating Station as a whole, as the case may be, based on the capital expenditure actually incurred up to the date of making the Petition or a date prior to making of the Petition, duly audited and certified by the statutory auditors/independent auditor and the provisional tariff shall be charged from the date of commercial operation of such Unit or Stage or Generating Station, as the case may be.
- 40.5 A Generating Company shall make a fresh Petition in accordance with these Regulations, for determination of final tariff based on actual capital expenditure incurred up to the date of commercial operation of the Generating Station duly certified by the statutory auditors based on Annual Audited Accounts.
- 40.6 Any difference in provisional tariff and the final tariff determined by the Commission and not attributable to the Generating Company may be adjusted at the time of determination of final tariff for the following year as directed by the Commission.

#### 41 Components of Tariff

- 41.1 The tariff for sale of electricity from a thermal Power Generating Station shall comprise of two parts, namely, the recovery of Annual Fixed Charges and Energy (variable) Charges (for recovery of primary and secondary fuel cost)
- 41.2 The tariff for sale of electricity from a Hydro Generating Station shall comprise of two parts, namely, the recovery of Capacity Charge and Energy Charge.

#### 42 Annual Fixed Charges

- 42.1 The Annual Fixed Charges shall comprise of the following elements:
- a. Return on Equity Capital;
  - b. Interest on Loan Capital;
  - c. Depreciation;
  - d. Operation & Maintenance Expenses;
  - e. Interest on Working Capital;

Less:

- (a) Non Tariff Income.

Provided that Depreciation, Interest on Loan Capital and Return on Equity Capital for Thermal and Hydro Generating Stations shall be considered in accordance with the provisions specified in Chapter 5 of these Regulations.

Provided further that special allowance in lieu of R&M where opted in accordance to Regulation 29.5 and/or separate compensation allowance in accordance to Regulation **Error! Reference source not found.**, wherever applicable shall be recovered separately and shall not be considered for computation of working capital.

### **43 Capital cost**

- 43.1 For the purpose of determination of tariff, the Capital Cost for a generating station and additional capitalisation thereof, shall be allowed in accordance with the provisions outlined under Regulation 28 and Regulation 29 respectively.
- 43.2 The provisions of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India, as amended from time to time, shall apply, to the extent not inconsistent with these Regulations, in determining the original cost of capital expenditure projects and/or original cost of fixed assets capitalized.

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

- 44.1 The tariff for sale of infirm power from the thermal Generating Station to the Distribution Licensee shall be equivalent to the actual fuel cost, including the secondary fuel cost, as the case may be, incurred during that period subject to prudence check.
- Provided that any revenue other than the recovery of fuel cost earned by the generating company from sale of infirm power shall be taken as reduction in capital cost and shall not be treated as revenue.
- 44.2 The tariff for sale of infirm power for Hydro Stations to the Distribution Licensee shall be the lowest energy rate of the existing hydro-station in the state and the revenue recovered from sale of infirm power shall be deducted from the capital cost.

### **45 Non Tariff Income**

- 45.1 The amount of non-tariff income relating to the Generation Business as approved by the Commission shall be deducted from the Annual Fixed Cost in determining the Annual Fixed Cost of the Generation Company:

Provided that the Generation 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 from time to time.

The indicative list of various heads to be considered for non-tariff income shall be as under:

- a) Income from rent of land or buildings;
- b) Income from sale of scrap;
- c) Income from statutory investments;
- d) Income from sale of Ash/rejected coal;
- e) Interest on delayed or deferred payment on bills;
- f) Interest on advances to suppliers/contractors;
- g) Rental from staff quarters;
- h) Rental from contractors;
- i) Income from hire charges from contractors and others;
- j) Income from advertisements, etc.;
- k) Any other non-tariff income

### **46 Norms of operation for Thermal Generating Stations**

- 46.1 Recovery of capacity charge, energy charge and incentive by the generating company shall be based on the achievement of the operational norms specified in the regulations 47.1 to 49.

46.2 The Commission may on its own revise the norms of Station Heat Rate in respect of any of the generating stations for which relaxed norms have been specified

#### 47 Norms of operation for Thermal Power Station

47.1 Normative Annual Plant Availability Factor (NAPAF) for recovery of full (fixed) charges:

i. Existing Plants:

Name of Plant	MYT Period		
	2019-20	2020-21	2021-22
i) Namrup TPS	50%	50%	50%
ii) Lakwa TPS with WHRU	50%	50%	50%

ii. New plants commissioned on or after 1st April, 2019 for recovery of full (fixed) charge:

Description	
Normative Annual Plant Availability Factor (NAPAF) in %	85

47.2 Normative (Target) Plant Load Factor for incentive

i. Existing Plants:

Name of Plant	MYT Period		
	2019-20	2020-21	2021-22
i) Namrup TPS	50%	50	50
ii) Lakwa TPS with WHRU	66%	66%	66%

ii. New plants commissioned on or after 1st April, 2019 for recovery of full (fixed) charge:

Description	(in %)
Coal based generating station	85%
Gas based generating station	85%
Gas-engine based generating station	90%

47.3 Auxiliary Energy Consumption

i. Existing Plants:

Name of Plant	MYT Period		
	2019-20 (%)	2020-21 (%)	2021-22 (%)
i) Namrup TPS	4.50%	4.50%	4.50%
ii) Lakwa TPS with WHRU	5.50%	5.50%	5.50%



ii. New plants commissioned on or after 1st April, 2019:

Description	MYT Period		
	2019-20 (%)	2020-21 (%)	2021-22 (%)
<b>(i) Coal-based Generating Stations</b>			
<b>(a) Below 200 MW cap.</b>			
With cooling tower	9	9	9
Without cooling tower	8.5	8.5	8.5
(with natural draft cooling tower or without cooling tower)			
(b) 200 MW series	8.5	8.5	8.5
(c) 500 MW series			
i) With steam driven boiler feed	6	6	6
ii) With electrically driven boiler fee pump	8.5	8.5	8.5
<b>(ii) Gas based Generating Stations</b>			
Open Cycle	1	1	1
Combined Cycle	2.5	2.5	2.5
where electricity driven Gas Booster Compressor is used			
Open Cycle	4	4	4
Combined Cycle	5	5	5
<b>(iii) Gas engine</b>			
Open Cycle	2	2	2
with Gas Booster Compressor			
Open Cycle	3.5	3.5	3.5

47.4 Gross Station Heat Rate (GSHR):

i. Existing Plants:

Name of Plant	MYT Period		
	2019-20 (kcal/kWh)	2020-21 (kcal/kWh)	2021-22 (kcal/kWh)
<b>NTPS</b>			
(i) O.C.	4300	4300	4300
(ii) Partially C.C.	3900	3900	3900
<b>LTPS</b>			
(i) O.C.	3900	3900	3900
(ii) Partially C.C.	3200	3200	3200

ii. New plants commissioned on or after 1st April, 2019:

a. Coal based thermal power Generating Stations = 1.045 x 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:

Pressure Rating (Kg/cm <sup>2</sup> )	150	170	170	247
SHT/RHT (0C)	535/535	537/537	537/565	565/593
Type of BFP	Electrical Driven	Turbine Driven	Turbine Driven	Turbine Driven
Max Turbine Cycle Heat rate (kCal/kWh)	1955	1950	1935	1850
Min. Boiler Efficiency				
Sub-Bituminous Indian Coal	0.86	0.86	0.86	0.86
Bituminous Imported Coal	0.89	0.89	0.89	0.89
Max Design Unit Heat rate (kCal/kWh)				
Sub-Bituminous Indian Coal	2273	2267	2250	2151
Bituminous Imported Coal	2197	c2191	2174	2078

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 station heat rate:

Provided also that maximum turbine cycle heat rate shall be adjusted for type of cooling system:

Provided also that if one or more units were declared under commercial operation prior to 1.4.2016, the heat rate norms for those units as well as units declared under commercial operation on or after 1.4.2016 shall be lower of the heat rate norms arrived at by above methodology and the norms as per Regulation 0 (ii) of these Regulations;

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 BFP.

- b. Gas-based / Liquid-based thermal generating unit(s)/ block(s)

$$= 1.05 \times \text{Design Heat Rate of the unit/block for Natural Gas and RLNG (kCal/kWh)}$$

= 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.

c. Gas-engine based generating station

Capacities	Heat Rate*
1 to 3MW	As per CEA Regulation
3 to 5 MW	As per CEA Regulation
>5 MW	2000kCal / kWh for open cycle
>5 MW	1825kCal / kWh for closed cycle

*\*The Commission may decide to amend and notify the revised norms on case to case basis*

47.5 Secondary Fuel Oil Consumption

New plants on or after 1<sup>st</sup> April, 2019:

- i) Coal based thermal generating plant – 0.5 ml/kWh
- ii) Coal based thermal generating plant with CFBC technology - 1ml/kWh

47.6 Stabilization period and availability levels:

In relation to a unit, stabilization period shall be reckoned commencing from the date of commercial operation of that unit as follows, namely:

	PAF(%)	Stabilization period
(i) Coal-based thermal generating stations	65	180 days
(ii) Gas turbine / combined cycle generating stations	65	90 days

47.7 Wherever the station is designed for combined cycle operation, the approval of SLDC shall be required for operation of the station in the open cycle mode.

47.8 The Commission may prescribe relaxed operational norms including the norms of Normative Annual Plant Availability Factor contained in these Regulations for a generating station in case of Renovation & Modernization undertaken for the generating station or recommendations on energy saving schemes/ performance improvement studied in house / other independent agencies, and these relaxed norms shall be applicable for determination of tariff for such generating station during the Control Period.

Provided further that if any Unit of any of APGCL's Generating Stations is shut-down due to implementation of Central Power Research Institute (CPRI) recommendations, the Target Availability calculation for recovery of annual fixed charges shall be computed after removing the Capacity under shut-down for the actual period of shut-down subject to the prior approval of the Commission for the improvement scheme along-with the approval of Capital expenditure.

47.9 In case of renovation and modernisation, derating and rerating of the generating station, norms of operation shall be reviewed and modified accordingly by the Commission.

47.10 The Commission vide separate notification may specify norms for future years on case to case basis.

#### 48 Transit and handling Losses

48.1 Transit and handling losses for coal based generating stations, as a percentage of quantity of coal dispatched by the coal supply company during the month shall be as given below:

- i. Pit head generating stations : 0.2%
- ii. Non-pit head generating stations : 0.8%

48.2 The above norms shall be applicable for all types of coal i.e., domestic coal, washed coal and imported coal.

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

#### 49 Norms of operation for Hydro Generating Stations

49.1 The norms of operation as given hereunder shall apply for existing hydro stations in the state:

Parameters	KLHEP
NAPAF	85%
PLF	44.5%
Auxiliary Consumption	0.50%

49.2 The norms of operation for hydro generating station except those specified in Regulation 49.1 shall be as under, namely:

Sl. No.	Particulars	Normative Annual Plant Availability Factor
a)	Storage and Pondage type plants with head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) of up to 8%, and where plant availability is not affected by silt	90%
b)	Storage and Pondage type plants with head variation between FRL and MDDL of more than 8%, where plant availability is not affected by silt	Month wise peaking capability as provided by the project authorities in the DPR (approved by CEA or the State Government) shall form 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

In addition to the above :

- a) 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.

- b) A further allowance of 5% may be allowed for difficulties in the State.
- c) In case of a new hydro electric project the developer shall have the option of approaching the Commission in advance for fixation of NAPAF based on the principles enumerated in Clause 49.2 and sub-clause a) and b) of this regulation.
- d) In case of Pumped storage hydro generating stations, the quantum of electricity required for pumping water from down-stream reservoir to up-stream reservoir shall be arranged by the beneficiaries duly taking into account the transmission and distribution losses etc. up to the bus bar of the generating station. In return, beneficiaries shall be entitled to equivalent energy of 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:  
Provided further that the beneficiaries may assign or surrender their share of capacity in the generating station, in part or in full, or the capacity may be reallocated by the Central Government, and in that event, the owner or assignee of the capacity share shall be responsible for arranging the equivalent energy to the generating station in off-peak hours, and be entitled to corresponding energy during peak hours in the same way as the original beneficiary was entitled.

#### 49.3 Auxiliary Energy Consumption

- a) Surface Hydro electric power Generating Stations
  - i. With rotating exciters mounted on the generator shaft - 0.7%
  - ii. With static excitation system: 1%
- b) Underground hydro Generating Station
  - i. With rotating exciters mounted on the generator shaft - 0.9%
  - ii. With static excitation system: 1.2%

#### 49.4 Transformation losses

From generation voltage to transmission voltage - 0.5% of energy generated.

- 49.5 The Commission vide separate notification may specify norms for future years on case to case basis.

## 50 Operation and Maintenance cost (O&M)

### 50.1 Existing Generating Station

- a. The Operation and Maintenance expenses including insurance shall be derived on the basis of the average of the actual Operation and Maintenance expenses for the three (3) years ending March 31, 2018, based on the audited financial statements, excluding abnormal Operation and Maintenance expenses, if any, subject to prudence check by the Commission.
- b. The average of such operation and maintenance expenses shall be considered as operation and maintenance expenses for the financial year ended March 31, 2017 and shall be escalated based on the escalation factor as approved by the Commission for the respective years to arrive at operation and maintenance expenses for the base year commencing April 1, 2018.

- c. The O&M expenses for each subsequent year shall be determined by escalating the base expenses determined above for previous FY at the escalation factor 6.30% to arrive at permissible O&M expenses for each year of the Control Period.
- d. Provided that in case, an existing Generating Station has been in operation for less than three (3) years as at on the date of effectiveness of these Regulations, the O&M Expenses shall be as specified at Regulation 50.2 for New Generating Stations.

50.2 New Generating Station

- a. For Coal based Generating Stations:

Particulars	Rs. Lakh/MW			
	200/210/250 MW Sets	300/330/350 MW Sets	500 MW Sets	600 MW and above Sets
FY 2019-20	32.43	27.07	21.72	19.54
FY 2020-21	34.47	28.77	23.09	20.77
FY 2021-22	36.64	30.58	24.54	22.08

*Note: In case of a plant capacity below 200 MW, the Commission shall determine the norms on case to case basis.*

Provided 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 1.4.2016 in the same station.

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

- b. Gas Turbine/Combined Cycle Generating Stations

Year	Rs. Lakh/MW		
	Gas Turbine/Combined Cycle Generating Stations other than small gas turbine power generating stations	Small gas turbine power generating stations	Advance F Class Machines
FY 2019-20	19.90	46.24	36.74
FY 2020-21	21.15	49.15	39.05
FY 2021-22	22.48	52.25	41.51

## c. Gas-engine based Generating Station

Parameter	Open Cycle	Combined Cycle
O&M cost for FY 2015-16 (Rs. Lakh/ MW/year)	27.03*	27.03*

\*The O&M expenses for each subsequent year shall be determined by escalating the base expenses determined above at the escalation factor 6.30% to arrive at permissible O&M expenses for each subsequent year.

## d. Hydro Generating Stations

Existing Hydro Generating Stations

- i. The O&M charges for existing hydro generating stations shall be computed similar to the methodology detailed in Regulation 50.1.

New Hydro Generating Stations

- ii. O&M expenses for first year of operation shall be specified as 2% of the original project cost (excluding cost of rehabilitation and resettlement works) for the first year of operation.
- iii. The O&M expenses for each subsequent year shall be determined by escalating the base expenses determined above, at the escalation factor of 6.64%.

## 51 Computation and Payment of Annual Fixed Charges and Energy Charges for Thermal Generating Stations

### 51.1 Annual Fixed Charges

- a. The total Annual Fixed Charges shall be computed based on the norms specified under these Regulations and recovered on monthly basis.
- b. The full Annual Fixed Charges shall be recoverable at Normative Annual Plant Availability factor (NAPAF) specified in these Regulation. Recovery of Annual Fixed Charges below the level of NAPAF shall be on pro rata basis. At zero Availability, no Capacity Charges shall be payable.
- c. Payment of Annual Fixed Charges shall be on monthly basis in equal installments in proportion to contracted capacity subject to adjustment at the end of the year with respect to NAPAF.

### 51.2 Energy Charges

- a. The Energy (variable) Charges shall cover landed fuel costs and shall be computed as follows:

Energy (variable) Charges shall cover fuel costs and shall be worked out on the basis of ex-bus energy sent out from the Generating Station as per the following formula:

Energy Charges (Rs) = Rate of Energy Charges in Rs/kWh x Energy (ex-bus) for the month in kWh corresponding to actual generation.

- b. Rate of Energy Charges (REC) in Rs/kWh shall be the sum of the cost of normative quantities of primary and secondary fuel for delivering one kWh of electricity ex-bus and shall be computed as under:

Where,

$$REC = \frac{100\{P_p \times (Q_p)_n + P_s \times (Q_s)_n\}}{(100 - (AUX)_n)} \text{ (Rs/kWh)}$$

$P_p$  = Price of primary fuel namely coal or gas or liquid fuel and lime stone, 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 based Generating Stations) and gross calorific value of coal or gas or liquid fuel as fired.

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

$(Q_s)_n$  = Normative Quantity of Secondary fuel oil in ml/kWh,

$AUX_n$  = Normative Auxiliary Energy Consumption as % of gross generation.

Energy Charges, for the purpose of billing/Fuel Surcharge shall be worked out station-wise based on weighted average rate based on actual generation from the Units of each Station

- 51.3 Adjustment of rate of energy charge (REC) [Fuel Surcharge Adjustment] on account of variation in price or calorific value of fuels

Any variation in Price and Gross Calorific Value of coal or gas or liquid fuel vis-à-vis approved values shall be adjusted on month to month basis on the basis of average Gross Calorific Value of coal or gas or liquid fuel in stock, received and burnt and weighted average landed cost incurred by the Generating Company for procurement of coal, oil, or gas or liquid fuel, as the case may be for a power station. In its bills, the Generating Company shall indicate rate of energy charges at base price of primary and secondary fuel specified by the Commission and the Fuel Surcharge to it separately. The Generating Company should submit the computation to the Commission on quarterly basis for analysis and approval of Fuel Surcharge Adjustment.

- 51.4 Landed Cost of fuel

The landed cost of fuel shall include price of fuel corresponding to the grade/ quality/ calorific value of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/road/gas pipe line or any other means, 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 51.2.



## 52 Incentive

52.1 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.

Provided that the actual generation shall also consider the generation loss on account of any backing down instruction from the Assam State Load Despatch Centre.

52.2 The Incentive amount shall be computed and billed on monthly basis based on the cumulative Plant Load Factor till the respective month in a Year, subject to adjustment at the end of the year.

## 53 Computation and Payment of Annual Fixed Charges and Energy Charges for Hydro Generating Stations

53.1 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. Further, 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.

53.2 The capacity charge (inclusive of incentive) payable to a Hydro Generating Station for a calendar month shall be

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

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

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

$$PAFM = 10000 \times \sum DC_i / \{N \times IC \times (100 - AUX)\} \% \quad i = 1$$

Where,

AUX = Normative auxiliary energy consumption in percentage

DC<sub>i</sub> = Declared capacity (in ex-bus MW) for the ith day of the month which the station can deliver for at least three (3) hours, as certified by the Assam State Load Despatch Centre after the day is over.

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

N = Number of days in the month

The Energy Charge shall be payable by every beneficiary for the total energy supplied to the beneficiary, during the calendar month, on ex-power plant basis, at the computed Energy Charge rate.

Total Energy Charge payable to the Generating Company for a month shall be:

(Energy Charge Rate in Rs. / kWh) x {Scheduled Energy (ex-bus) for the month in kWh} x (100 – FEHS) /100

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

$$ECR = AFC \times 0.5 \times 10 / \{ DE \times ( 100 - AUX ) \times (100 - FEHS)\}$$

Where,

DE = Annual Design Energy specified for the Hydro Generating Station, in MWh, subject to the provision in Regulation 49.5 below.

FEHS = Free energy for home State, in percent

- 53.5 In case actual total energy generated by a Hydro Generating Station during a year is less than the Design Energy for reasons beyond the control of the Generating Company, the following treatment shall be applied on a rolling basis:

- i. in case the energy shortfall occurs within ten years from the date of commercial operation of a Generating Station, the ECR for the year following the year of energy shortfall shall be computed based on the formula specified in Regulation 49.4 with the modification that the DE for the year shall be considered as equal to the actual energy generated during the year of the shortfall, till the Energy Charge shortfall of the previous year has been made up, after which normal ECR shall be applicable;

Provided that in case actual generation from a hydro 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 CEA with relevant hydrology data for revision of design energy of the station.

- ii. in case the energy shortfall occurs after ten years from the date of commercial operation of a Generating Station, the following shall apply:  
Suppose the specified annual Design Energy (DE) for the station is DE MWh, and the actual energy generated during the concerned (first) and the following (second) financial years is A1 and A2 MWh, respectively, A1 being less than DE. Then, the design energy to be considered in the formula in Regulation 49.4 of these Regulations for calculating the ECR for the third financial year shall be moderated as (A1 + A2 – DE) MWh, subject to a maximum of DE MWh and a minimum of A1 MWh.
- iii. Actual energy generated (e.g., A1, A2) shall be arrived at by multiplying the net metered energy sent out from the station by 100 / (100 – AUX).

- 53.6 In case the actual saleable energy in a year exceeds  $\{DE \times (100 - AUX) \times (100 - FEHS) / 10000\}$  MWh, the Energy Charge for the energy in excess of the above shall be billed equal to the lowest variable charges of the central sector thermal power generating stations in the north east region.
- 53.7 The Assam State Load Despatch Centre shall finalise the schedules for the hydro 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.

### **Pumped Storage Hydro Generating Stations:**

- 53.8 The fixed cost of a pumped storage hydro generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis as capacity charge. The capacity charge shall be payable by the beneficiaries in proportion to their respective allocation in the saleable capacity of the generating station, i.e., the capacity excluding the free power to the home State:

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.

- 53.9 The capacity charge payable to a pumped storage hydro generating station for a calendar month shall be:

$(AFC \times NDM / NDY)$  (in Rupees), if actual Generation during the month is  $\geq 75\%$  of the Pumping Energy consumed by the station during the month and  $\{(AFC \times NDM / NDY) \times (\text{Actual Generation during the month during peak hours} / 75\% \text{ of the Pumping Energy consumed by the station during the month})\}$  (in Rupees), if actual Generation during the month is  $< 75\%$  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.

- 53.10 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, excluding free energy, if any, during the calendar month, on ex power plant basis.

- 53.11 Energy charge payable to the generating company for a month shall be:

$= 0.20 \times \{\text{Scheduled energy (ex-bus) for the month in kWh} - (\text{Design Energy for the month (DEm)} + 75\% \text{ of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month})\} \times (100 - FEHS) / 100.$

Where,

DEm = Design energy for the month specified for the hydro generating station, in MWh

FEHS = Free energy for home State, in per cent, as defined in regulation 41, if any.

Provided that in case the Scheduled energy 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.

- 53.12 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. The generator shall be required to maximize the peak hour supplies with the available water including the natural flow of water. In case it is established that generator is deliberately or otherwise without any valid reason, is 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. 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 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%:

$$(ACC)_{adj} = (ACC) R \times (100 - ATO) / 85$$

Where,

(ACC)<sub>adj</sub> – Adjusted Annual Capacity Charges

(ACC) R – Annual Capacity Charges recovered

ATO - Total Outages in percentage for the year including forced and planned outages

Provided further 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 of Grid Code.

- 53.13 The concerned Load Despatch Centre shall finalise the schedules for the hydro 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.

## 54 Scheduling

- 54.1 The methodology for scheduling and dispatch for the generating plant shall be as specified in the Assam Electricity Grid Code Regulations/CEA technical standards for Connectivity to the Grid Regulations and the intra state Availability Based Tariff regulations to be notified by the Commission as amended from time to time. Until the intra-State Availability Based Tariff regulations are notified by the Commission CERC Availability Based Tariff regulations would be applicable

**55 Deviation Settlement Mechanism (DSM) Charges.**

- 55.1 DSM charges for intra-state transactions will arise after intra-state ABT is notified by the Commission and becomes effective.

**56 Metering and Accounting**

- 56.1 Metering arrangements, including installation, testing and operation and maintenance of meters and collection, transportation and processing of data required for accounting of energy exchanges and average frequency on time block basis shall be organised by the State Transmission Utility/ State Load Despatch Centres. All concerned entities (in whose premises the special energy meters are installed), shall fully cooperate with the State Transmission Utility/ State Load Despatch Centre and extend the necessary assistance by taking weekly meter readings and transmitting them to the State Load Despatch Centre. The State Load Despatch Centre shall issue the Accounts for energy on monthly basis as well as DSM charges on weekly basis. DSM accounting procedures shall be governed by the orders of the Commission.
- 56.2 The cost of additional investment required for metering and metering equipment for the purpose of implementing intra state ABT shall be allowed to be passed through.

**57 Demonstration of declared capacity**

- 57.1 The Generating Company may be required to demonstrate the declared capacity of its Generating Station as and when asked by the Assam State Load Despatch Centre. In the event of the Generating Company failing to demonstrate the declared capacity, the capacity charges due to the Generating Company shall be reduced as a measure of penalty.
- 57.2 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. For the second mis-declaration, the penalty shall be equivalent to fixed charges for four days. For the third mis-declaration, the penalty shall be equivalent to fixed charges for eight days and similarly for subsequent mis-declarations in the year, the penalty shall be computed progressively.
- 57.3 The operating logbooks of the Generating Station shall be available for review by the SLDC, as the case may be. These books shall keep record of machine operation and maintenance.

**58 Billing and Payment of Charges**

- 58.1 The Billing and Payment of Annual Fixed Charges, Energy Charges, Fuel Surcharge Adjustments and Incentive for Thermal Generating Stations shall be done on a monthly basis subject to adjustments at the end of the year.
- 58.2 The Billing and Payment of Capacity Charges and Energy Charges for Hydro Generating Stations shall be done on a monthly basis.
- 58.3 In case the payment of bills is delayed beyond a period of two (2) months from the date of billing, a late payment surcharge at the rate of 1.25 per cent per month shall be allowed to be levied by the Generating Company.
- 58.4 For payment of bills of the generating company through letter of credit or otherwise, a rebate of 1% shall be allowed if payment is made within 7 days of presentation of bills by the Generating Company.

## CHAPTER 7: COMPONENTS OF ARR AND TARIFF FOR TRANSMISSION LICENSEE

### 59 Applicability

- 59.1 The Regulations contained in this Chapter shall apply in determining tariff for access and use of the intra-State transmission system of a Transmission Licensee pursuant to a Bulk Power Transmission Agreement or other arrangement entered into with a Transmission System User on or after the date of notification of these Regulations.

Provided that the Commission may revise the norms contained in this Chapter or stipulate alternative norms for particular cases, where it so deems appropriate, having regard to the circumstances of the case:

Provided further that the reasons for such revision shall be recorded in writing:

Provided further that in case of an existing transmission system, the Commission shall determine the tariff having regard to the historical performance of such transmission system and on the basis of application for determination of Aggregate Revenue Requirement submitted by the Transmission Licensees at the beginning of the Control Period with reasonable opportunities for improvement in performance, if any.

- 59.2 The Commission shall be guided by the terms and conditions contained in this Chapter in specifying the rates, charges, terms and conditions for use of intervening transmission facilities pursuant to an application made in this regard by a Transmission Licensee under the proviso to Section 36 of the Act.

### 60 Components of Tariff

- 60.1 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; and
  - d. reactive energy charges.

#### Transmission system access charges

- 60.2 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 AERC (Terms and Conditions for Open Access) Regulations, 2005, as amended from time to time 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.

- 60.3 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.

60.4 Where the access of the intending Transmission System User entails other works, not covered under Regulation 60.3 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 60.10 below:

60.5 Where any works for obtaining access has 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 carried out by the intending Transmission System User.

Provided that such supervision charges shall form part of the Non-Tariff Income of the respective Transmission Licensee and also shall be treated as O&M expense incurred by the intending transmission system users, which shall be capitalised in the respective year of asset capitalisation.

60.6 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:

60.7 Where the Transmission System User has paid for the works carried out to provide him access to the intra-State transmission system, the Transmission System User shall be entitled to the depreciated value of such works paid for by him upon termination of the Bulk Power Transmission Agreement:

Provided that where the Transmission System User has carried out the works to provide him 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.

60.8 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.

60.9 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.

#### Annual transmission charges for each year of the Control Period

60.10 The annual transmission charges for each financial year of the Control Period shall provide for the recovery of the aggregate revenue requirement of the Transmission Licensee for the respective financial year of the Control Period, as reduced by the amount of non-tariff income and income from Other Business, as approved by the Commission and comprising the following:

Aggregate revenue requirement:

- a) Return on Equity Capital;
- b) Interest on Loan Capital;
- c) Depreciation;
- d) Operation and maintenance expenses;
- e) Interest on working capital and deposits from Transmission System Users;

minus:

- f) Non-tariff income; and
- g) Income from Other Business, to the extent specified in these Regulations Provided that in case of competitively awarded transmission system projects in pursuance of Section 63 of the Act and in accordance with guidelines for competitive bidding for transmission, the annual transmission charges shall be as per the Annual Transmission Service Charges (TSC) quoted by such competitively awarded transmission projects.

60.11 The annual transmission charges of the Transmission Licensee shall be determined by the Commission on the basis of an application for determination of aggregate revenue requirement or application for adoption of annual transmission charges in case of competitively awarded transmission system project, as the case may be, made by the Transmission Licensee in accordance with Chapter 3 of these Regulations.

## **61 Multi-Year Tariff**

61.1 Except where exempted by the Commission, the Regulations contained in Chapter 3 of these Regulations shall apply to all Transmission Licensees and Transmission System Users in the State with effect from April 1, 2016.

## **62 Financial Principles**

62.1 Except where exempted by the Commission, the Regulations contained in Chapter 5 of these Regulations shall apply to all Transmission Licensees in the State with effect from April 1, 2016.

## **63 Capital Investment Plan**

63.1 Each Transmission Licensee shall submit a Capital Investment Plan, as part of MYT Petition, to the Commission in accordance with Regulation 6 of these Regulations including complete details of its capital expenditure projects.

63.2 Separate prior approval of the Commission shall be required for all capital expenditure schemes of a value exceeding Rs. 10Crore.

63.3 The Commission shall review the Capital Investment Plan submitted by the Transmission Licensee taking into consideration the prudence of the proposed expenditure and estimated impact on transmission charges in accordance with Regulation **Error! Reference source not found.**

63.4 The Transmission Licensee shall submit, along with the MYT Petition or along with the Petition for Annual 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.

#### **64 Capital Cost**

- 64.1 For the purpose of determination of tariff, the Capital Cost for a Transmission Project and additional capitalisation thereof, shall be allowed in accordance with the provisions outlined under Regulation 28 and Regulation 29 respectively.
- 64.2 The provisions of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India, as amended from time to time, shall apply, to the extent not inconsistent with these Regulations, in determining the original cost of capital expenditure projects and/or original cost of fixed assets capitalized.
- 64.2.1 The amount of any contributions made by Transmission System Users towards works for access to the intra-State transmission system of the Transmission Licensee shall be deducted from the original cost for such project for the purpose of calculating the Equity Capital as provided in these Regulations.

#### **65 Norms for operation**

- 65.1 Target availability for full recovery of annual transmission charges

(a) AC system : 98 per cent

(b) HVDC bi-pole links & HVDC back to back stations : 95 per cent

For incentive consideration:

(a) AC system : 98.5 per cent

(b) HVDC bi-pole links & HVDC back to back stations : 96 per cent

Provided that for new HVDC station NATAF shall be considered as 95% for first three years of operations for the purpose of incentive:

Provided that no incentive shall be payable above the availability of 99.75%:

Provided further that the computation of incentive/disincentive shall be undertaken during annual performance review and at the end of Control Period.

#### **66 Calculation of Aggregate Revenue Requirement**

- 66.1 Aggregate Revenue Requirement of Transmission Licensee shall comprise of following components, viz.,
- a) Return on Equity Capital;
  - b) Interest on Loan Capital;
  - c) Depreciation;
  - d) Operation and maintenance expenses;
  - e) Interest on working capital and deposits from Transmission System Users.
- Less
- g) Non-tariff income; and
  - h) Income from Other Business, to the extent specified in these Regulations.

66.2 Return on Equity Capital

66.2.1 The Transmission Licensee shall be allowed a return on equity capital, as specified in Regulation 33 of these Regulations.

66.3 Interest on Loan capital

66.3.1 The Transmission Licensee shall be allowed interest on the Loan Capital, as specified in Regulation 0 of these Regulations.

66.4 Depreciation

66.4.1 The Transmission Licensee shall be permitted to recover depreciation on the value of fixed assets used in the Transmission Business as specified in Regulation 32 of these Regulations.

66.5 Operation and Maintenance expenses

66.5.1 The norms for O&M expenses for existing and new Transmission Licensees have been stipulated for the Control Period 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 deriving normative O&M expenses under these Regulations, the "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 herein 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 deriving the O&M expenses of a year, 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.

**66.6 Existing Transmission Licensee**

66.7 Operation and Maintenance (O&M) expenses shall comprise of the following

- a) Salaries, wages, pension contribution and other employee costs;
- b) Administrative and general expenses including insurance charges if any;
- c) Repairs and maintenance expenses;

66.8 The O&M expenses for the first year of the Control Period shall be approved by the Commission taking into account the actual O&M expenses for last five years till Base Year subject to prudence check and any other factors considered appropriate by the Commission.

66.9 The O&M expenses for the nth year and also for the year immediately preceding the Control Period shall be approved based on the formula given below:-

$$O\&M_n = R\&M_n + EMP_n + A\&G_n$$

Where –

- $O\&M_n$  – Operation and Maintenance expense for the nth year;
- $EMP_n$  – Employee Costs for the nth year;
- $R\&M_n$  – Repair and Maintenance Costs for the nth year;
- $A\&G_n$  – Administrative and General Costs for the nth year;

66.10 The above components shall be computed in the manner specified below:

$$EMP_n = (EMP_{n-1}) \times (1+G_n) \times (CPI_{inflation})$$

$$R\&M_n = K \times (GFA_{n-1}) \times (WPI_{inflation}) \text{ and}$$

$$A\&G_n = (A\&G_{n-1}) \times (WPI_{inflation}) + \text{Provision}$$

Where -

- $EMP_{n-1}$  – Employee Costs for the (n-1)th year;
- $A\&G_{n-1}$  – Administrative and General Costs for the (n-1)th year;
- Provision: Cost for initiatives or other one-time expenses as proposed by the Distribution Licensee and validated by the Commission.
- 'K' is a constant specified by the Commission in %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;
- CPIinflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;
- WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;
- $GFA_{n-1}$  --- Gross Fixed Asset of the transmission licensee for the n-1th year;
- $G_n$  is a growth factor for the nth year. Value of  $G_n$  shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on licensee's filings, benchmarking, and any other factor that the Commission feels appropriate:

66.11 O&M Norms for New Transmission Licensee

For the New transmission licensees, the year-wise O&M norms shall be determined on case to case basis:

Provided that the same shall not be applicable to those new projects which are awarded on a competitive bidding basis.

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 effectiveness of these Regulations, and whose transmission project assets are commissioned after March 31, 2016.

66.12 O&M Sharing between two Transmission Licensees

66.13 For such Transmission Licensees whose bays are installed in the premises of and maintained by another Transmission Licensee, the O&M expense for such assets shall be allowed in accordance with the norms applicable for the Transmission Licensee who performs the O&M of such assets:

Provided that the Transmission Licensees shall mutually agree on sharing of such allowed O&M expenses:

Provided further that Transmission Licensees shall project addition of such assets over the Control Period separately in their Capital Investment Plan to be submitted in accordance with Regulation **Error! Reference source not found.**

66.14 Interest on working capital

66.15 The Transmission Licensee shall be allowed interest on the estimated level of working capital, as specified in Regulation 36 of these Regulations.

## 67 Non-Tariff Income

67.1 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 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 along with its application for determination of aggregate revenue requirement.

## 68 Income from Other Business

68.1 Where the Transmission Licensee has engaged in any Other Business, an amount equal to one-third of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the aggregate revenue requirement in calculating the 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 to the Commission along with its application for determination of tariff:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceed 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.

## 69 Computation and Payment of Transmission Charge

69.1 The Annual Transmission Charges for the Transmission Licensee shall be determined, based on the norms as specified in these Regulations and recovered on monthly basis as transmission charge from the users who shall share the Transmission Charge in proportion of the allotted transmission capacity.

Provided that the charges payable by the Transmission System Users may also take into consideration factors such as voltage, distance, direction, quantum of flow and time of use, as may be specified by the Commission in its order.

69.2 The transmission charge (inclusive of incentive) payable for a calendar month for a transmission system or part thereof shall be computed in accordance with the following equation:

**For AC system:**

a) For TAFM &lt; 98%

$$\text{AFC} \times (\text{NDM/NDY}) \times (\text{TAFM}/98\%)$$

b) For TAFM: 98% &lt; TAFM &lt; 98.5%

$$\text{AFC} \times (\text{NDM/NDY}) \times (1)$$

c) For TAFM: 98.5% &lt; TAFM &lt; 99.75%

$$\text{AFC} \times (\text{NDM/NDY}) \times (\text{TAFM}/98.5\%)$$

d) For TAFM &gt; 99.75%

$$\text{AFC} \times (\text{NDM/NDY}) \times (99.75\%/98.5\%)$$

**For HVDC bi-pole links and HVDC back-to-back Stations:**

a) For TAFM &lt; 95%

$$\text{AFC} \times (\text{NDM/NDY}) \times (\text{TAFM}/95\%)$$

b) For TAFM: 95% &lt; TAFM &lt; 96%

$$\text{AFC} \times (\text{NDM/NDY}) \times (1)$$

c) For TAFM: 96% &lt; TAFM &lt; 99.75%

$$\text{AFC} \times (\text{NDM/NDY}) \times (\text{TAFM}/96\%)$$

d) For TAFM &gt; 99.75%

$$\text{AFC} \times (\text{NDM/NDY}) \times (99.75\%/96\%)$$

Where,

AFC = Annual Fixed Cost specified for the year in Rupees

NATAF = Normative annual Transmission availability factor, in per cent

NDM = Number of days in the month

NDY = Number of days in the year

TAFM = Transmission System availability factor for the month, in percent computed in accordance with Appendix II.

69.3 The monthly Transmission Tariff as determined by the Commission as per Regulation 69.2 above shall be shared by all long-term and medium-term open access customers on monthly basis (including existing Distribution Licensees) in the ratio of their allotted capacities.

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

**70 Open Access Transactions**

70.1 All the matters related to Open Access Transactions shall be dealt in accordance with Assam Electricity Regulatory Commission (Terms and Condition for Open Access) Regulations, 2005 as applicable and as amended from time to time.

**71 Transmission losses**

71.1 The energy losses in the transmission system of the Transmission Licensee, as determined by the State Load Despatch Centre and approved by the Commission, shall be borne by the Transmission System Users pro-rata to their usage of the intra-State transmission system:

Provided that the Commission may stipulate a trajectory for reduction of transmission losses in accordance with Regulation 7, as a part of Multi Year Tariff framework applicable to the Transmission Licensee.

Provided that for difference between the actual level of transmission losses, as determined by the State Load Despatch Centre and the approved level, the transmission ARR shall be adjusted proportionately..

**72 Payment Modalities and Payment Security**

72.1 State Transmission Utility (STU) shall raise monthly bill for Intra-State Transmission Charges on every Transmission System User (TSU) on 1st working day of the Month for the Transmission Charges of preceding month.

72.2 The monthly bill for transmission tariff for each calendar month shall be payable on 14th day of subsequent calendar month by the TSUs.

72.3 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.

72.4 Where there is delay in payment by any TSU, late payment surcharge at the rate of 1.25% per month or part thereof shall be applicable.

72.5 For payment of bills of the transmission licensee through letter of credit or otherwise, a rebate of 1% shall be allowed if payment is made within 7 days of presentation of bills by the Transmission Licensee.

## **CHAPTER 8: COMPONENTS OF ARR AND TARIFF FOR DISTRIBUTION WHEELING BUSINESS**

### **73 Separation of accounts**

73.1 The distribution licensee shall segregate the accounts of the licensed business into Wheeling Business and Retail Supply Business and submit separate ARR for respective businesses. The ARR for wheeling business shall be used to determine wheeling charges recoverable from open access consumers and the ARR for Retail Supply Business to determine retail supply tariff for sale of electricity to different categories of consumers of the licensee which will be inclusive of wheeling charges.

Provided that till such time the accounts are segregated as per provisions of these regulations, the distribution licensee shall prepare an allocation statement to apportion costs and revenues to respective business. The allocation statement shall be approved by the Board of Directors of the distribution licensee and accompanied with an explanation of the methodology which should be consistent over the control period.

### **74 Applicability**

74.1 The Regulations contained in this Chapter shall apply in determining tariff payable for usage of distribution wires of a Distribution Licensee by a Distribution System User.

### **75 Components of Aggregate Revenue Requirement for Distribution Wheeling Business**

75.1 The wheeling charges for Distribution Wheeling Business of the Distribution Licensee shall provide for the recovery of the Aggregate Revenue Requirement, as provided in Regulation 79 of these Regulations and shall comprise the following:

Aggregate Revenue Requirement:

- a. Return on Equity Capital;
- b. Interest on Loan Capital;
- c. Depreciation;
- d. Operation and maintenance expenses;
- e. Interest on working capital and deposits from Distribution System Users; and
- f. Provision for Bad and doubtful debts.

Wheeling charges = Aggregate Revenue Requirement, as above, minus:

- g. Non-tariff income; and
- h. Income from Other Business, to the extent specified in these Regulations, and
- i. Receipts on account of additional surcharge on charges of wheeling.

75.2 The wheeling charges of the Distribution Licensee shall be determined by the Commission on the basis of an application for determination of tariff made by the Distribution Licensee in accordance with Chapter 3 of these Regulations.

Provided that the Wheeling Charges may be denominated in terms of Rupees/kWh or Rupees/kW/month, for the purpose of recovery from the Distribution System User, or any such denomination, as stipulated by the Commission from time to time.

## 76 Multi-Year Tariff

76.1 Except where exempted by the Commission, the Regulations contained in Chapter 3 of these Regulations shall apply to all Distribution Licensees in the State with effect from April 1, 2019.

## 77 Capital Investment Plan

77.1 The Distribution Licensee shall submit a Capital investment plan, as part of the MYT Petition, to the Commission in accordance with Regulation **Error! Reference source not found.** of these Regulations including complete details of its proposed capital expenditure projects:

77.2 The Commission shall review the Capital Investment Plan submitted by the Distribution Licensee taking into consideration the prudence of the proposed expenditure and estimated impact on transmission charges in accordance with Regulation **Error! Reference source not found.**

77.3 The Distribution Licensee shall submit, along with the MYT Petition or along with the Petition for Annual 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.

## 78 Capital cost

78.1 The approved Capital Investment Plan of the Distribution Licensee shall be the basis for determining the annual allowable capital cost for each financial year for any capital expenditure project initiated on or after April 1, 2019.

78.2 For each capital expenditure project, the sum total of annual allowable capital cost from the date of commencement of such project till the date of commissioning shall be the original cost of such project.

78.3 The provisions of the Statements of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India shall apply, to the extent not inconsistent with these Regulations, in determining the original cost of capital expenditure projects and/or original cost of fixed assets capitalised.

78.4 The capital cost shall be allowed as provided in Regulation 28.

78.5 The amount of any contributions made by consumers and Distribution System Users towards works for access to the distribution system of the Distribution Licensee shall be deducted from the original cost for such project for the purpose of calculating the Equity Capital, as provided in these Regulations.

## 79 Calculation of Aggregate Revenue Requirement

### 79.1 Return on Equity Capital

79.1.1 The Distribution Licensee shall be allowed a return on equity capital on Distribution Wheeling Business, as specified in Regulation 33 of these Regulations.

### 79.2 Interest on Loan capital

79.2.1 The Distribution Licensee shall be allowed interest on the Loan Capital, as specified in Regulation **34** of these Regulations.



### 79.3 Depreciation

79.3.1 The Distribution Licensee shall be permitted to recover depreciation on the value of fixed assets used in the Distribution Business as specified in Regulation 32 of these Regulations.

### 79.4 Operation and Maintenance expenses

79.4.1 The Distribution Licensee shall be allowed O&M expense as provided in Regulation 37 of these Regulations.

### 79.5 Interest on security deposits

79.5.1 Interest on security deposits shall be at the SBI base rate as on 1<sup>st</sup> April of the respective financial year.

### 79.6 Interest on working capital

79.6.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital, as specified in Regulation 36 of these Regulations.

### 79.7 Provision for Bad and doubtful debts

79.7.1 The Commission may allow a provision for bad and doubtful debts upto 1% of the amount shown as receivables in the audited accounts of the Distribution Licensee, duly allocated for the Wheeling Business:

Provided that where the amount of such provisioning for bad and doubtful debts exceeds five (5) per cent of the amount shown as receivables in the audited accounts of the Distribution Licensee duly allocated for the Wheeling Business, no such appropriation shall be allowed which would have the effect of increasing the provisioning beyond the said maximum.

## **80 Non-Tariff Income**

80.1 The amount of non-tariff income relating to the Distribution Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the wheeling charges of Distribution Wheeling Business of the Distribution Licensee:

Provided that the Distribution Licensee shall submit full details of its forecast of non-tariff income to the Commission along with its application for determination of wheeling charges.

## **81 Income from Other Business**

81.1 Where the Distribution Licensee has engaged in any Other Business, an amount equal to one-third of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the Aggregate Revenue Requirement in determining the wheeling charges of Distribution Wheeling Business of the Distribution Licensee:

Provided that the Distribution Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Distribution Business and the Other Business and shall submit the Allocation Statement to the Commission along with its application for determination of wheeling charges:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceed the revenues from such Other Business, no amount shall be allowed to be

added to the Aggregate Revenue Requirement of the Distribution Licensee on account of such Other Business

## 82 Determination of Wheeling Charges

82.1 The Commission shall specify the wheeling charge of Distribution Wheeling Business of the Distribution Licensee in its Order passed under sub-section (3) of Section 64 of the Act:

Provided that the charges payable by a Distribution System User under this Chapter 8 may comprise any combination of fixed/demand charges, and variable charges, as may be stipulated by the Commission in such Order.

## 83 Receipts on account of Additional surcharge

83.1 The amount received by the Distribution Licensee by way of additional surcharge on charges of Distribution Wheeling Business, as approved by the Commission in accordance with the AERC (Terms and Conditions for Open Access) Regulations 2005, as amended from time to time, from Distribution System users, shall be deducted from the aggregate revenue requirement in calculating the wheeling charges of such Distribution Licensee.

## 84 Wheeling losses

84.1 The Distribution Licensee shall be allowed to recover, in kind, the approved level of technical losses arising from the operation of the distribution system:

Provided that the Commission may stipulate a trajectory for wheeling losses in accordance with Regulation **Error! Reference source not found.**:

Provided that any variation between the actual level of wheeling losses and the approved level shall be dealt with, as part of the Annual Performance Review, in accordance with the mechanisms provided in Regulation 9.

## 85 Wires Availability

85.1 The target Wires Availability for full recovery of Return on Equity Capital for Wheeling Business shall be as under:

- |                      |            |
|----------------------|------------|
| a) Rural Areas:      | 90 percent |
| b) Towns and cities: | 95 percent |

Provided that the Commission may stipulate a trajectory for achieving the target Availability for Wheeling Business of the Distribution Licensee:

Provided further that for every 1 percent under-achievement in Wires Availability, Rate of Return on Equity Capital shall be reduced by 0.1%:

Provided further that for every 1 percent over-achievement in Wires Availability, Rate of Return on Equity Capital shall be increased by 0.1%.

85.2 Wires Availability shall be computed in accordance with the following formula:

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

Where

Provided that the SAIDI shall be calculated in accordance with the definition specified in AERC (Distribution Licencees' Standards of Performance) Regulations, 2004, Period for Giving Supply and Determination of Compensation) Regulations, 2005, as amended from time to time.

- 85.3 Wires Availability shall be measured over the course of a year and shall be expressed in percentage terms.

## CHAPTER 9: COMPONENTS OF ARR AND TARIFF FOR RETAIL SUPPLY BUSINESS

### 86 Applicability

86.1 These Regulations shall apply for determination of tariff for retail supply of electricity by a Distribution Licensee to its consumers:

### 87 Components of Tariff

87.1 The tariff for retail supply by a Distribution Licensee shall provide for recovery of the aggregate revenue requirement of the Distribution Licensee for each year of the Control Period, as approved by the Commission and comprising the following: -

87.2 Aggregate revenue requirement:

- (a) Return on Equity Capital;
- (b) Interest on Loan Capital;
- (c) Depreciation;
- (d) Cost of own power generation /power purchase expenses;
- (e) Transmission charges;
- (f) Operation and Maintenance expenses;
- (g) Interest on working capital and on consumer security deposits; and
- (h) Provision for Bad and doubtful debts.

Revenue requirement from sale of electricity = Aggregate revenue requirement, as above, minus:

- (i) Non-tariff income;
- (j) Income from Other Business, to extent specified in these Regulations;
- (k) Receipts on account of cross-subsidy surcharge.

87.3 The tariff for retail supply by the Distribution Licensee shall be determined by the Commission on the basis of an application for determination of tariff made by the Distribution Licensee in accordance with Chapter 3 of these Regulations.

87.4 Provided that the Commission may determine tariff for Zones/Circles/Divisions or for the groups of Zones/Circles/Divisions of a Distribution Licensee based on the performance parameters as may be stipulated by the Commission.

87.5 The Distribution Licensee shall be allowed to offer a rebate to the consumers on 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 from time to time.

Provided that the impact of such rebates on the Distribution Licensee shall be borne entirely by the Distribution Licensee and impact of such rebate shall not be allowed by the Commission to be passed through to the consumers, in any form.

Provided that such rebates should not to 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.

## **88 Multi-Year Tariff**

- 88.1 Except where exempted by the Commission, the Regulations contained in Chapter 3 of these Regulations shall apply to all Distribution Licensees in the State with effect from April 1, 2019.

## **89 Capital Investment Plan**

- 89.1 The Distribution Licensee shall submit a detailed Capital investment plan, and physical targets for each year of the Control Period for meeting the requirement of load growth, reduction in distribution losses, increase in collection efficiency, metering, consumer services, etc. to the Commission for approval, along with the MYT Petition:
- 89.2 The Distribution Licensee shall submit the Capital Investment Plan in accordance with Regulation **Error! Reference source not found.** of these Regulations.
- 89.3 The Commission shall approve the Capital investment plan in accordance with the principles specified in these Regulations.

## **90 Capital Cost**

- 90.1 The approved Capital Investment Plan of the Distribution Licensee shall be the basis for determining the annual allowable capital cost for each financial year for any capital expenditure project initiated on or after April 1, 2019.
- 90.2 For each capital expenditure project, the sum total of allowable capital cost from the date of commencement of such project till the date of commissioning shall be the original cost of such project:
- 90.3 The provisions of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India, as amended from time to time, shall apply, to the extent not inconsistent with these Regulations, in determining the original cost of capital expenditure projects and/or original cost of fixed assets capitalised.
- 90.4 The amount of any contributions made by consumers and Distribution System Users towards works for Retail Supply by the Distribution Licensee shall be deducted from the original cost for such project for the purpose of calculating the Equity Capital, as provided in these Regulations.
- 90.5 The capital cost shall be allowed as provided in Regulation 28.

## **91 Sales forecast**

- 91.1 The Distribution Licensee shall submit a monthly 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 MYT Petition, as specified in these Regulations.

- 91.2 The sales forecast shall be consistent with the load forecast prepared as part of the long-term power procurement plan under Chapter 4 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.

## 92 Calculation of Aggregate Revenue Requirement

### 92.1 Return on Equity Capital

- 92.1.1 The Distribution Licensee shall be allowed a return on equity capital as specified in Regulation 33 of these Regulations.

### 92.2 Interest on Loan capital

- 92.2.1 The Distribution Licensee shall be allowed interest on the Loan Capital, as specified in Regulation 34 of these Regulations.

### 92.3 Depreciation

- 92.3.1 The Distribution Licensee shall be permitted to recover depreciation on the value of fixed assets used in the Distribution Business as specified in Regulation 32 of these Regulations.

### 92.4 Cost of power generation/power purchases

- 92.4.1 The Distribution Licensee shall be allowed to recover the cost of power generated by the Generation Business or purchased from approved sources for supply to consumers based on the power procurement plan of the Distribution Licensee, as per Regulation **Error! Reference source not found.** and in the manner as stipulated in Chapter 4 of these Regulations.

### 92.5 Transmission charges

- 92.5.1 The Distribution Licensee shall be allowed to recover transmission charges payable for access to and use of the intra-State transmission system in accordance with the tariff approved by the Commission under Chapter 7 of these Regulations.

### 92.6 Operation and Maintenance expenses

- 92.7 The Distribution Licensee shall be allowed O&M expense as provided in Regulation 37 of these Regulations.

### 92.8 Interest on working capital

- 92.8.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital, as specified in Regulation 36 of these Regulations.

### 92.9 Provision for Bad and doubtful debts

- 92.9.1 The Commission may allow a provision for bad and doubtful debts upto 1% of the amount shown as receivables in the audited accounts of the Distribution Licensee, duly allocated for the Supply Business:

Provided that where the amount of such provisioning for bad and doubtful debts exceeds five (5) per cent of the amount shown as receivables in the audited accounts of the Distribution Licensee duly allocated for the Wheeling Business, no such appropriation shall be allowed which would have the effect of increasing the provisioning beyond the said maximum.

**93 Non-Tariff Income**

- 93.1 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 calculating the tariff from retail supply of electricity of the Distribution Licensee:

Provided that the Distribution Licensee shall submit full details of its forecast of non-tariff income to the Commission along with its application for determination of tariff.

Provided further that, while considering the Delayed Payment Surcharge earned from consumer as part of Non-Tariff Income, the amount of Delayed Payment Surcharge paid to Long Term Power suppliers shall be deducted.

**94 Income from Other Business**

- 94.1 Where the Distribution Licensee has engaged in any Other Business, an amount equal to one-third of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the Aggregate Revenue Requirement in calculating the tariff from 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 Distribution Business and the Other Business and shall submit the Allocation Statement to the Commission along with its application for determination of tariff:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceed the revenue from such Other Business, no amount shall be allowed to be added to the aggregate revenue requirement of the Distribution Licensee on account of such Other Business.

Provide also that nothing contained in this Regulation shall apply to a local authority engaged, before the commencement of the Act, in the business of distribution of electricity.

**95 Receipts on account of cross-subsidy surcharge**

- 95.1 The amount received by the Distribution Licensee by way of cross-subsidy surcharge, as approved by the Commission in accordance with the AERC (Terms and Conditions for Open Access) Regulations 2005, as amended from time to time, shall be deducted from the Aggregate Revenue Requirement in calculating the tariff for retail supply of electricity by such Distribution Licensee.

**96 Distribution Losses**

- 96.1 The Distribution Licensee shall be allowed to recover the approved level of distribution losses arising from the Retail Supply of electricity, excluding wheeling losses:

Provided that the Commission may stipulate a trajectory for distribution losses for Retail Supply of electricity in accordance with these Regulations:

Provided that any variation between the actual level of distribution losses and the approved level shall be dealt with, as part of the Annual Performance Review and at the time of final truing up at the end of the Control Period.

**97 Supply Availability**

97.1 Supply Availability shall comprise of the following parameters in the proportion as mentioned below:

- |                                  |            |
|----------------------------------|------------|
| a) Base load Supply Availability | 75 percent |
| b) Peak load Supply Availability | 25 percent |

97.2 Target Supply Availability for full recovery of Return on Equity Capital for Retail Supply of electricity is in the range of 85 percent to 95 percent, as may be determined by the Commission:

Provided that the Commission may stipulate a trajectory for achieving the target Supply Availability for Retail Supply of electricity:

Provided that for every 1 percent under-achievement in Supply Availability, rate of Return on Equity Capital shall be reduced by 0.1%.

Provided that for every 1 percent over-achievement in Supply Availability, rate of Return on Equity Capital shall be increased by 0.1%.

97.3 Base load Supply Availability shall be computed in accordance with the following formula:

$$= (\text{Actual Contracted Base Load Supply in MW}) \div (\text{Base load in MW})$$

Provided that the base load shall be calculated based on unrestricted demand of a Distribution Licensee for the retail supply of electricity.

97.4 Peak load Supply Availability shall be computed in accordance with the following formula:

$$= (\text{Actual Contracted Peak Load Supply in MW}) \div (\text{Peak load in MW})$$

Provided that the peak load shall be calculated based on unrestricted demand of a Distribution Licensee for the retail supply of electricity.



## **CHAPTER 10: Terms and Conditions of Determination of ARR and Tariff of SLDC**

### **98 Applicability**

- 98.1 These Regulations shall apply for determination of fees and charges to be collected by the SLDC from the users of intra-state transmission system (i.e. Generating companies, transmission and distribution licensee, trading companies and open access consumers)
- 98.2 The transmission licensee notified as State Transmission Utility by the State Govt. as per Section 39(1) of the Act and entrusted with the operation of SLDC shall submit separate ARR for its transmission business and SLDC business, as long as it remains under its control, as per provisions of these regulations. The ARR for each business shall be based on the audited accounts of the corresponding business. After a Government company or an authority or a corporation is established or constituted for operation of SLDC by or under any State Act, as may be notified by the State Govt. as per provisions of Section 31 of the Act, the ARR for SLDC business shall be submitted by such Government company, authority or corporation, as the case may be, as per provisions of these regulations.
- 98.3 The Commission may require the STU or the Government company/Authority/Corporation established for operation of SLDC or the SLDC itself to submit such details/information as may be required for determination of SLDC charges. Further, the Commission may give directions to SLDC in relation to the role and functioning of SLDC

### **99 Application for Registration with SLDC**

- 99.1 Each of the users of intra-State transmission system, which come under the purview of SLDC, shall register themselves with the SLDC, within a month of coming into force of these Regulations, by filing an application to the SLDC along with the fee of Rs 10,000 (Rupees Ten Thousand only) or such amended fees as may be decided by the Commission from time to time.
- 99.2 The new users of intra-State transmission system coming under the purview of SLDC, shall submit an application to the SLDC, at least one month before the proposed date of connection to the Intra-State transmission system, along with the above-mentioned Fee.
- 99.3 After being satisfied with the completeness and correctness of the information furnished in the application, the SLDC, shall register the application in its records and duly intimate the applicant regarding such registration.
- 99.4 The SLDC shall maintain consolidated information about all the users connected to the Intra-State transmission system and being monitored / serviced by it, on a separate web-page on their web-site.

### **100 Petition for determination of SLDC Charges**

- 100.1 The SLDC shall provide to the Commission, full details of its calculations of its Aggregate Revenue Requirement for the ensuing financial year, not later than four months before the commencement of the said ensuing Year.

- 100.2 The total annual expenses and return on equity of the SLDC for each financial year of the Control Period shall be worked out on the basis of expenses and return allowed in terms of these Regulations.
- 100.3 The SLDC shall also file the proposed allocation of charges to all the users of intra State Transmission System being monitored and serviced by it in line with these Regulations. SLDC shall further forward a copy of its petition for determination of Aggregate Revenue Requirement along with the proposal for allocation of charges to all the users of intra State Transmission System being monitored and serviced by it.
- 100.4 The SLDC shall provide the details of calculation of the expenses and other related information in the formats as specified by the Commission from time to time.
- 100.5 The SLDC shall also furnish the details of capital investment plan for the control period. For capital investment schemes costing above Rupees One Crore, approval of the Commission shall be obtained in respect of each of such schemes prior to commencement of works.
- 100.6 The Aggregate Revenue Requirement and other details filed by the SLDC shall be scrutinised and as a result of such scrutiny, the Commission may call for such further information and clarification as may be required.
- 100.7 Based on the information furnished by SLDC and after due examination, scrutiny and consultation process, the Commission will approve the Aggregate Revenue Requirement covering the expenses of the SLDC and determine the SLDC Charges.
- 100.8 In the event of non-revision of SLDC charges during any year, any variation (shortfall or excess) in recovery of SLDC charges shall be carried forward to the next financial year and adjusted as may be decided by the Commission.
- 100.9 The SLDC shall submit periodic returns containing operational and cost data, as may be prescribed by the Commission.
- 100.10 All filings and application for determination of SLDC Charges shall be made in conformity with the stipulations made in these Regulations

### **101 Levy of SLDC Charges**

- 101.1 All expenses incurred by the SLDC, established by the State Government under Section 31 of the Act, shall be accounted for separately;

Provided that if on the date of publication of these Regulations, the State Transmission Utility (STU) is operating the State Load Despatch Centre and performing the functions under the Act, as provided under sub-clause (2) of Section 31 of the Act, the STU shall maintain separate accounts for expenses related to operation of the State Load Despatch Centre;

Provided further that till such time the accounts are not segregated, the STU shall apportion its costs on the basis of an Allocation Statement to be submitted to the Commission with all relevant details.

### **102 Annual SLDC Charges**

- 102.1 The annual charges to be recovered by the SLDC shall include the component of Return on Equity and also the following expenses:
- a. O&M expenses;
  - b. Return on Equity

- c. Depreciation;
- d. Lease Charges
- e. Interest and Finance charges;
- f. Income Tax, if any;
- g. Interest on working capital, if any;
- h. Any other expenses incidental to discharging the functions of SLDC as deemed appropriate by the Commission;

minus

- i. Non-tariff income including but not limited to interest on investment, fees/charges other than SLDC charges, Income from sale of scrap, etc.

### 103 Operation and Maintenance Expenses

103.1 Operation and Maintenance (O&M) expenses shall comprise of the following:-

- a. Salaries, wages, pension contribution and other employee costs;
- b. Administrative and general expenses including insurance charges if any;
- c. Repairs and maintenance expenses;

103.2 The O&M expenses for the first year of the Control Period will be approved by the Commission taking into account actual O&M expenses of the previous years and any other factors considered appropriate by the Commission.

103.3 The O&M expenses for the nth year and also for the year immediately preceding the Control Period shall be approved based on the formula given below:-

$$O\&M_n = R\&M_n + EMP_n + A\&G_n$$

Where –

- O&M<sub>n</sub> – Operation and Maintenance expense for the nth year;
- EMP<sub>n</sub> – Employee Costs for the nth year;
- R&M<sub>n</sub> – Repair and Maintenance Costs for the nth year;
- A&G<sub>n</sub> – Administrative and General Costs for the nth year;

103.4 The above components shall be computed in the manner specified below:

$$EMP_n = (EMP_{n-1}) \times (1+G_n) \times (CPIinflation)$$

$$R\&M_n = K \times (GFA_{n-1}) \times (WPIinflation) \text{ and}$$

$$A\&G_n = (A\&G_{n-1}) \times (WPIinflation) + Provision$$

Where -

- EMP<sub>n-1</sub> – Employee Costs for the (n-1)th year;
- A&G<sub>n-1</sub> – Administrative and General Costs for the (n-1)th year;
- Provision: Cost for initiatives or other one-time expenses as proposed by the SLDC and validated by the Commission.
- 'K' is a constant specified by the Commission in %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on SLDC's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

- CPIinflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;
- WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;
- $GFA_{n-1}$  --- Gross Fixed Asset of the transmission licensee for the  $n-1^{th}$  year;
- $G_n$  is a growth factor for the  $n$ th year. Value of  $G_n$  shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on SLDC's filings, benchmarking, and any other factor that the Commission feels appropriate:

#### **104 Basis for collection of SLDC charges**

104.1 The annual SLDC charges as determined by the Commission shall be allocated between the Beneficiaries using the intra-State transmission system on the basis of contracted transmission capacity.

Provided further that SLDC shall be entitled to levy and collect fee and charges for any other services rendered to the users and power exchanges as specified in any other regulations.

104.2 The Short-term open access customers using the intra-State transmission system shall however pay only such scheduling charges to the SLDC as may be specified by the Commission.

#### **105 Billing of SLDC Charges:**

105.1 The SLDC shall furnish necessary monthly bills at the rate of one twelfth of the annual charges as approved by the Commission, to the users of intra State Transmission System being monitored and serviced by it for each billing month within seven days after the last day of the preceding month;

Provided that for the purpose of billing and collection of the prescribed charges, a fraction of a MW shall be treated as one full MW.

105.2 The Beneficiaries shall make payment to the SLDC of the amounts due within one month of the date of receipt of the bill.

105.3 Disputes arising out of billing of SLDC charges shall be, as far as possible, settled by mutual negotiations. If the disputes are not resolved through mutual negotiations within sixty (60) days of the receipt of the bills, the matter shall be referred to the Commission through a petition by either of the parties. The decision of the Commission shall be final and binding on all the parties.

105.4 Pending resolution of the dispute, 90% of the bill amount shall be paid under protest within the due date.

## **CHAPTER 11: GRANT OF SUBSIDIES BY STATE GOVERNMENT**

### **106 Manner of provision of subsidy by State Government**

106.1 Pursuant to Section 65 of the Electricity Act, 2003 in case the State Government requires grant of any subsidy to any consumer or class of consumers in the tariff determined under Section 62 of the Act, the State Government shall, notwithstanding any direction which may be given under Section 108 of the Act, pay, in advance in the manner as may be specified, by the Commission the amount to compensate the person affected by the grant of subsidy in the manner the Commission may direct, as a condition for the licence or any other person concerned to implement the subsidy provided for by the State Government:

Provided that no such direction of the State Government shall be operative if the payment is not made in accordance with the provisions contained in this section and the tariff fixed by State Commission shall be applicable from the date of issue of orders by the Commission in this regard.

## **CHAPTER 12: MISCELLANEOUS**

### **107 Hearing**

- 107.1 The Commission may hold hearing(s) on the ARR/tariff filing and hear such persons as the Commission may consider appropriate to decide on such ARR/tariff filing.
- 107.2 The procedure of hearing on the ARR/Tariff filing shall be as per the provisions of the AERC (Conduct of Business) Regulations, 2004 as amended from time to time or in the manner as the Commission may decide from time to time.

### **108 Issue of Orders and Directions**

- 108.1 Subject to the provision of the Act and these regulations, the Commission may, from time to time, issue orders and directions in regard to the implementation of these regulations and procedure to be followed on various matters.

### **109 Interpretation**

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

### **110 Sharing of CDM Benefits**

- 110.1 The proceeds of carbon credit from approved CDM project shall be shared in the following manner, namely-
- (i) 100% of the gross proceeds on account of CDM to be retained by the project developer in the first year after the date of commercial operation of the generating station or the transmission system or the distribution system, as the case may be;
  - (ii) in the second year, the share of the beneficiaries shall be 10% which shall be progressively increased by 10% every year till it reaches 50%, where after the proceeds shall be shared in equal proportion, by the generating company or the transmission or distribution licensee, as the case may be, and the beneficiaries.

### **111 Norms of operation to be ceiling norms**

- 111.1 Norms of operation specified in these regulations are the ceiling norms and shall not preclude the generating company or the transmission licensee or the distribution licensee, as the case may be, and the beneficiaries and the long-term transmission and distribution customers from agreeing to the improved norms of operation and in case the improved norms are agreed to, such improved norms shall be applicable for determination of tariff.

### **112 Power to Amend**

- 112.1 The Commission may, at anytime, vary, alter, modify or amend any provisions of these Regulations.

### **113 Power to remove difficulties**

- 113.1 If any difficulty arises in giving effect to any of the provisions of these regulations, the Commission may, by a general or special order, not being inconsistent with the provisions of these regulations or the Act, do or undertake to do things or direct the generating company or

the licensee to do or undertake such things which appear to be necessary or expedient for the purpose of removing the difficulties. Power to Relax The Commission may in public interest and for reasons to be recorded in writing, relax any of the provision of these regulations.

#### **114 Power to Relax**

114.1 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 may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.

#### **115 Saving of Inherent Powers of the Commission**

115.1 Nothing in these regulations shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary for ends of justice or to protect consumers' interest or to prevent the abuse of the process of the Commission.

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

115.3 Nothing in these regulations shall, expressly or by implication, bar the Commission to deal with any matter or exercise any power under the Act for which no regulations have been framed, and the Commission may deal with such matters, powers and functions in a manner it thinks fit.

#### **116 Repeal**

116.1 Save as otherwise provided in these Regulations, the "Assam Electricity Regulatory Commission (Terms and Conditions for determination of Multi Year Tariff) Regulations, 2015 and amendments thereof" are hereby repealed.

116.2 Notwithstanding such repeal, any proceedings before the Commission pertaining to the period till FY 2018-19, including review Petitions, shall be governed by the "Assam Electricity Regulatory Commission (Terms and Conditions for determination of Multi Year Tariff) Regulations, 2015 and amendments" thereof.

**S.K. ROY**  
Secretary,  
Assam Electricity Regulatory Commission