

DRAFT NOTIFICATION**KERALA STATE ELECTRICITY REGULATORY COMMISSION**

No. _____

Dated, Thiruvananthapuram __.__.2014

Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014

In exercise of the powers conferred under Section 61 read with Section 181 of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in this behalf, the Kerala State Electricity Regulatory Commission hereby makes the following Regulations.

**CHAPTER – I
PRELIMINARY**

1. Short title, commencement, extent and applicability. – (1) These Regulations may be called the Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014.

(2) These Regulations shall come into force from the date of publication in the official gazette:

Provided that the determination of tariff or truing up or review matters pertaining to the period till FY 2014-15, i.e., upto March 31, 2015, shall be governed by the KSERC (Tariff) Regulations, 2003, the KSERC (Terms and Conditions of Tariff for Retail Sale of Electricity) Regulations, 2006, and the KSERC (Terms and Conditions for Determination of Tariff for Distribution and Retail Sale of Electricity under MYT Framework) Regulations, 2006, including amendments thereto as the case may be.

(3) These Regulations shall extend to the whole of the State of Kerala.

(4) These Regulations shall be applicable, -

(i) to all businesses (generation, transmission, distribution business and the state load despatch centre) of the Kerala State Electricity

Board Limited (KSEB) and its successors, generating companies, transmission licensees, and distribution licensees and their successors, if any;

(ii) to determination of:

(a) tariff for supply of electricity by a generating business/company to a distribution Business/licensee;

(b) tariff for intra-State transmission of electricity;

(c) tariff for intra-State wheeling of electricity;

(d) tariff for retail supply of electricity;

(e) surcharge in addition to the charges for wheeling; and

(f) additional surcharge on the charges for wheeling;

(iii) in all cases covered under sub-regulation (4) (ii) of this regulation from April 1, 2015;

(5) 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, as envisaged under Section 63 of the Act:

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

2. Definitions. - In these Regulations, unless the context otherwise requires,

(1) “**accounting statements**” shall have the same meaning as defined in regulation 4 of these Regulations;

(2) “**act**” means the Electricity Act, 2003 (Central Act 36 of 2003), as amended from time to time;

(3) “**aggregate revenue requirement**” means the revenue requirement of the generating business/company or transmission business/licensee or distribution business/licensee for recovery, through tariffs, of allowable expenses and return on capital pertaining to its regulated/licensed business, in accordance with these Regulations;

- (4) “**allocation statement**” means for each financial year, a statement in respect of generating company or transmission licensee or distribution licensee or each of the separate businesses of the integrated Utility, showing the amounts of any common revenue, cost, asset, liability, reserve or provision, which has been either:
- (i) charged from or to each such separate business together with a description of the basis of that charge; or
 - (ii) determined by apportionment or allocation between different businesses of the regulated business including the licensed businesses, together with a description of the basis of the apportionment or allocation:
- (5) “**applicant**” means the generating business/company or transmission business/licensee or distribution business/licensee who has made an application for determination of aggregate revenue requirement and tariff in accordance with the Act and these Regulations and includes a generating business/company or transmission business/licensee or distribution business/licensee whose tariff is the subject of determination or 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 a Truing-up;
- (6) “**auxiliary energy consumption**” of a generating station or a generating Unit means the quantum of energy consumed by auxiliary equipment of the generating station or generating Unit and transformer losses within the generating station or generating Unit, and shall be expressed as a percentage of the sum of gross energy generated at the generator terminals of all the Units of the generating station:

Explanation: The auxiliary energy consumption of a generating station or generating Unit shall not include energy consumed for supply of power to housing colony and other facilities at the generating station and the power consumed for construction works at the generating station, which shall be metered separately;

- (7) “**availability**”
- (i) of a thermal generating station for any period means the average of the daily average declared capacities as certified by 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 as provided in **Annexure- II** to these Regulations;
 - (ii) of a transmission system for a given period means the time in hours during that period in which the transmission system is capable of transmitting electricity at its rated voltage expressed in percentage of total hours in the given period and shall be calculated as provided in **Annexure-II** to these Regulations;
- (8) “**bank rate**” means the standard rate notified by the Reserve Bank of India as per Section 49 of the Reserve Bank of India Act, 1934 (Central Act 2 of 1934), at which it is prepared to buy or re-discount bills of exchange or other commercial paper eligible for purchase thereunder;
- (9) “**base load**” means the average of monthly minimum system load in MW during the year of a distribution business/licensee in its area of supply, defined in terms of system demand in MW, as decided by the Commission from time to time;
- (10) “**base rate**” means the base rate declared by the State Bank of India from time to time;
- (11) “**beneficiary**” in relation to a generating station means the person purchasing electricity generated at such generating station and sharing the capacity charges under these Regulations;
- (12) “**bulk power transmission agreement**” means an Agreement executed between transmission licensee and the users of the transmission system of the transmission licensee that contains the terms and conditions under which a User of the transmission system is entitled to access the intra-State transmission system;
- (13) “**change in law**” means occurrence of any of the following events:

- (i) the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal of any law; or
 - (ii) change in interpretation of any law by a competent Court, Tribunal or Indian Governmental Instrumentality, which is the final authority under law for such interpretation; or
 - (iii) change by any competent statutory authority, in any consent, approval or licence.
 - (iv) 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;
- (14) “**Commission**” means the Kerala State Electricity Regulatory Commission;
- (15) “**conduct of business regulations**” means the Kerala State Electricity Regulatory Commission (Conduct of Business) Regulations, 2003, as amended from time to time;
- (16) “**current year**” shall mean the financial year in which the petition for determination of aggregate revenue requirement and tariff is required to be filed;
- (17) “**cut-off date**” means 31st March of the financial year after two years of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut-off date shall be 31st March of the financial year after three years of commercial operation:
- Explanation:** If the project is declared under commercial operation before January 1, 2016, then the cut-off date shall be 31st March, 2018. If the project is declared under commercial operation during January, 2016, i.e., last quarter of financial year 2015-16, then the cut-off date shall be 31st March, 2019;
- (18) “**day**” means a Gregorian calendar day consisting of the 24 hour period starting at 0000 hour;

- (19) “**date of commercial operation**” shall have the same meaning as defined in regulation 5 of these Regulations;
- (20) “**declared capacity**” or “**DC**” in relation to a generating station means, the capability to deliver ex-bus electricity in MW declared by such generating station in relation to any time-block of the day as defined in the State Grid Code or whole of the day, duly taking into account the availability of fuel or water, and subject to further qualification in the relevant regulation;
- (21) “**design energy**” means the quantum of energy which can be generated in a ninety percent (90%) dependable year with ninety-five percent (95%) installed capacity of the hydro generating station;
- (22) “**distribution business**” means the business of operating and maintaining a distribution system for supplying electricity in the area of supply of the distribution business/licensee;
- (23) “**distribution wires business**” means the business of operating and maintaining a distribution system for wheeling of electricity in the area of supply of the distribution licensee;
- (24) “**ensuing year**” shall mean the financial year following the current year for which the Petition for determination of aggregate revenue requirement and tariff is required to be filed;
- (25) “**expected revenue from tariff and charges**” means the revenue estimated to accrue to the generating business/company or transmission business/licensee or distribution business/licensee from the regulated business at the prevailing tariffs;
- (26) “**existing generating Unit/station**” means a generating Unit/station, which has declared commercial operation prior to the date of coming into effect of these Regulations;
- (27) “**existing project**” means a project which has declared commercial operation prior to the date of coming into effect of these Regulations;
- (28) “**financial year**” means a period commencing on 1st April of a Gregorian calendar year and ending on 31st March of the subsequent Gregorian calendar year;

- (29) “**force majeure**” for the purpose of these regulations means the event or circumstance or combination of event or circumstance, which partly or fully prevents the generating business/company or the transmission business/licensee or distribution business/licensee from completing the project within the time specified in the investment approval given by the Commission or performing its duties and obligations, and only if such event or circumstance are not within the control of the generating business/company or the transmission business/Licensee or distribution business/licensee and could not have been avoided, had the generating business/company or the transmission business/Licensee or distribution business/licensee taken reasonable care or complied with prudent utility practices, including those stated below:
- (i) Act of God including lightning, drought, fire and explosion, earthquake, volcanic eruption, landslide, flood, cyclone, typhoon, tornado, geological surprises, or exceptionally adverse weather conditions which are in excess of the statistical measures for the last hundred years; or
 - (ii) Any act of war, invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action; or
 - (iii) Industry wide strikes and labour disturbances having a nationwide impact in India;
- (30) “**generation business**” means the business of production of electricity from a generating station or generating Unit for the purpose of giving supply to any beneficiary or enabling supply to be so given;
- (31) “**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;
- (32) “**gross station heat rate**” means the heat energy input in kilocalories required to generate one kilowatt hour of electrical energy at generator terminals;

- (33) “**infirm power**” means electricity injected into the grid prior to the commercial operation of a Unit of the generating station;
- (34) “**installed capacity**” means the summation of rated 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;
- (35) “**intra-state transmission system (InSTS)**” means the system for conveyance of electricity by transmission lines within the area of the State and includes all transmission lines, sub-stations and associated equipment in the State;
- (36) “**licensee**” means a person who has been granted a licence under Section 14 of the Act and includes a person deemed to be a licensee under Section 14 of the Act;
- (37) “**maximum continuous rating**” or “**MCR**” in relation to a Unit of the generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer at rated parameters, and corrected the grid frequency of 50 Hz and specified site conditions;
- (38) “**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;
- (39) “**non-tariff income**” means income relating to the regulated business other than from tariff, excluding any income from other business and excluding income from wheeling and receipts on account of cross-subsidy surcharge and additional surcharge on charges of wheeling;
- (40) “**operation and maintenance expenses**” or “**O&M expenses**”
- (i) in relation to a generating business/company, means the expenditure incurred on operation and maintenance of the generating station or generating Unit, or part thereof, and includes the expenditure on manpower, repairs, spares, consumables, insurance, and administrative and general expenses, but excludes fuel expenses;

- (ii) in relation to a transmission business/licensee or distribution business/licensee, means the expenditure incurred on operation and maintenance of the system by the transmission business/licensee or distribution business/licensee, and includes the expenditure on manpower, repairs, spares, consumables, insurance, and administrative and general expenses;
- (41) “**original project cost**” means the capital expenditure incurred by the generating business/company or the transmission business/licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;
- (42) “**other business**” means any business undertaken by the transmission business/licensee under Section 41 of the Act for optimum utilization of its assets or by the distribution business/licensee under Section 51 of the Act for optimum utilization of its assets, other than the businesses regulated by the Commission;
- (43) “**peak load**” means the average of monthly maximum system load in MW during the year of a distribution business/licensee in its area of supply, defined in terms of system demand in MW, as decided by the Commission from time to time;
- (44) “**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 as certified by the State Load Despatch Centre during that period expressed as a percentage of the installed capacity in MW, reduced by the normative auxiliary energy consumption;
- (45) “**plant load factor**”, in relation to a thermal generating station for a given period, means the total sent-out energy 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 formula specified in the **Annexure- V** to these regulations:
- (46) “**previous year**” shall mean the financial year immediately preceding the current year;

- (47) “**project**” means a generating station or the transmission system or the distribution system, as the case may be, and in case of a hydro generating station includes all components of generating facility such as penstocks, head and tail works, main and regulating reservoirs dams and other hydraulic works, intake water conductor system, power generating station and generating units of the scheme, as apportioned to power generation;
- (48) “**prudence check**” means scrutiny of reasonableness of expenditure incurred or proposed to be incurred, financing plan, use of efficient technology, cost control, cost and time over-run and such other factors as may be considered appropriate by the Commission for determination of tariff.
- Explanation:** While carrying out the prudence check, the Commission may look into whether the generating business/company or transmission business/licensee or distribution business/licensee has been careful in its judgements and vigilant in incurring the expenditure;
- (49) “**pumped storage hydro generating station**” means a hydro station, which generates power through energy stored in the form of water, pumped from a lower elevation to a higher elevation;
- (50) “**rated voltage**” means the manufacturer’s design voltage at which the transmission system or distribution system is designed to operate or such lower voltage at which the line is charged, for the time being, in consultation with Users;
- (51) “**regulated business**” means the electricity business, which is regulated by the Commission in accordance with the Act and the regulations made thereunder;
- (52) “**renewable energy sources**” for the purpose of these Regulations means and includes the non-conventional renewable generating sources such as mini & micro hydel, wind, solar, biomass, bio-fuel cogeneration, urban/municipal waste and such other sources as approved by the Ministry of New & Renewable Energy, Government of India;

- (53) “**retail supply business**” means the business of sale of electricity by a distribution business/licensee to his consumers in accordance with the terms and conditions of his Licence;
- (54) “**run-of-river generating station**” means a hydro generating station, which does not have upstream pondage;
- (55) “**scheduled date of commercial operation**” or “**SCOD**” shall mean the scheduled date(s) of commercial operation of a generating station or generating Unit thereof or transmission system or element thereof or distribution system or element thereof as indicated in the Investment Approval or as agreed in power purchase agreement or transmission service agreement as the case may be, whichever is earlier;
- (56) “**State grid code**” means the “Kerala State Electricity Grid Code, 2005” as amended from time to time;
- (57) “**State load despatch centre**” or “**SLDC**” means the centre established by the State Government for the purpose of exercising the powers and discharging the functions under Section 31 of the Act;
- (58) “**State power committee**” means the State power committee set up under the State Grid Code specified by the Commission;
- (59) “**State transmission utility**” or “**STU**” means the State transmission utility as specified by the State Government under Sub-section (1) of Section 39 of the Act;
- (60) “**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;
- (61) “**tariff**” means the schedule of charges for generation, transmission, wheeling and supply of electricity together with terms and conditions for application thereof;
- (62) “**time block**” means a block of 15 minutes starting from 00.00 hours, unless the context requires otherwise;
- (63) “**transmission business**” means the business of establishing or operating transmission system;

- (64) “**transmission service agreement**” means the agreement, contract, or any such covenants, entered into between the transmission licensee and the user of the transmission service/lines;
- (65) “**transmission system**” means a line or a group of lines with or without associated sub-stations, and includes equipment associated with transmission lines and sub-stations;
- (66) “**generating Unit**” in relation to a hydro generating station means turbine-generator and its auxiliaries or in relation to a thermal generating station means generator, engine and its auxiliaries;
- (67) “**useful life**” in relation to a Unit of a generating station, transmission system and distribution system from the date of the commercial operation shall have the same meaning as specified in **Annexure-I** to these Regulations;
- (68) “**user**” means a licensee, or a generating company, or a person who has set up a captive generating plant, or a consumer availing open access, utilizing the transmission system of the transmission business/licensee or the distribution system of the distribution business/licensee;

The words and expressions used in these Regulations and not defined herein, but defined in the Act, shall have the meanings assigned to them under the Act.

CHAPTER – II GENERAL PRINCIPLES

3. Norms of operation to be ceiling norms. - The norms of operation specified under these Regulations are the ceiling norms and this shall not preclude the generating business/company or the transmission business/licensee or the distribution business/licensee, as the case may be, and the beneficiaries from agreeing to improved norms of operation and in case the improved norms are agreed to, such improved norms shall be applicable for determination of tariff.

4. Accounting Statements. - The accounting statements shall mean the following statements for Companies for each financial year, namely:

- (a) balance sheet, prepared in accordance with the form contained in Part I of Schedule VI to the Companies Act, 1956 as amended from time to time;
- (b) profit and loss account, complying with the requirements contained in Part II of Schedule VI to the Companies Act, 1956 as amended from time to time;
- (c) cash flow statement, prepared in accordance with the Accounting Standard on cash flow statement (AS-3) of the Institute of Chartered Accountants of India;
- (d) report of the statutory auditors;
- (e) cost records prescribed by the Central Government under Section 209(1)(d) of the Companies Act, 1956 as amended from time to time;

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

Provided further that in case of any other licensee 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 Licensee;

5. Date of commercial operation. – The date of commercial operation of a generating station or generating unit or a transmission system or distribution system shall be determined as under:

- (a) in relation to a generating unit of **hydro generating station** shall mean the date declared by the generating company from 0000 hour after the scheduling process in accordance with the State 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:

Provided that where beneficiaries have been tied up for purchasing power from generating station, scheduling process for a generating

unit of the generating station or demonstration of peaking capability corresponding to installed capacity of the generating station through a successful trial run shall commence after seven days notice by the generating company to the beneficiaries and scheduling shall commence from 0000 hour after completion of trial run:

Provided further that the generating company shall certify to the effect that the generating station meets key provisions of the technical standards of the Central Electricity Authority (Technical Standards for Construction of Electrical plants and electric lines) Regulations, 2010 and Grid code:

Provided further that the certificate shall be signed by CMD/CEO/MD of the company subsequent to its approval by the Board of Directors in the format enclosed at **Annexure- III** and a copy of the certificate shall be submitted to the Member Secretary (State Power Committee) and SLDC before declaration of COD:

Provided further that in case a 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, and it will 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:

Provided further that if a run-of-river hydro generating station or a generating unit thereof is declared under commercial operation during periods of lean inflow, when the water inflow is insufficient for such demonstration of peaking capability, it shall be mandatory for such hydro generating station or generating unit to demonstrate peaking capability equivalent to installed capacity as and when sufficient water inflow is available;

- (b) in relation to a unit of the **thermal generating station** shall mean the date declared by the generating company after demonstrating the maximum continuous rating (MCR) or the installed capacity (IC)

through a successful trial run after notice to the beneficiaries, if any, and in case of the generating station as a whole, the date of commercial operation of the last generating unit of the generating station:

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 and scheduling shall commence from 0000 hour after completion of the trial run:

Provided further that the generating company shall certify to the effect that the generating station meets the key provisions of the technical standards of Central Electricity Authority (Technical Standards for Construction of Electrical plants and electric lines) Regulations, 2010 and the State Grid Code:

Provided further that the certificate shall be signed by CMD/CEO/MD of the company subsequent to its approval by the Board of Directors in the format enclosed at **Annexure- III** and a copy of the certificate shall be submitted to the Member Secretary, (State Power Committee) and SLDC before declaration of COD;

- (c) in relation to a **transmission system** shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:

Provided that 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 a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating

station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof; and

- (d) in relation to a **distribution system** shall mean the date of charging the electric line or substation of a distribution licensee to its rated voltage level or seven days after the date on which it is declared ready for charging by the distribution licensee, but not able to charge for reasons not attributable to its suppliers or contractors:
- (e) the date of commercial operation shall not be a date prior to the scheduled date of commercial operation mentioned in power purchase agreement or the Implementation Agreement or the transmission service agreement or wheeling agreement, as the case may be, unless mutually agreed to by all parties.

CHAPTER – III

MULTI YEAR TARIFF PRINCIPLES

6. Multi-Year Tariff (MYT) Framework. – (1) The Multi-Year Tariff framework shall apply for determination of tariff by a generating business/company, transmission business/licensee, and distribution business/licensee.

(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 the generating business/company, transmission business/licensee, and distribution business/licensee:

- (i) Forecast of aggregate revenue requirement (ARR), expected revenue from existing and proposed tariffs and charges for the ensuing year, and the Commission shall determine the aggregate revenue requirement and tariff for the ensuing year of the generating business/company, transmission business/licensee, and distribution business/licensee;

- (ii) Truing up of expenses and revenue of previous year based on audited accounts vis-à-vis the approved forecast and categorisation of variation in performance as those caused by controllable factors and uncontrollable factors, as specified in regulation 10 of these Regulations;
- (iii) The mechanism for pass-through of approved gains or losses on account of uncontrollable factors as specified by the Commission in regulation 11 of these Regulations;
- (iv) The mechanism for sharing of approved gains or losses arising out of controllable factors as specified by the Commission in regulation 12 of these Regulations;
- (v) Annual tariff determination for generating business/company, transmission business/licensee, and distribution business/licensee, based on the approved forecast and results of the truing up exercise.

7. Control Period. – (1) The Control Period is the period for which the principle and norms specified under these Regulations shall be applicable.

- (2) The first Control Period under these Regulations shall be of three (3) financial years from April 1, 2015 to March 31, 2018.
- (3) The subsequent Control Period shall be decided by the Commission from time to time.
- (4) The Commission may review the principles and norms for determination of aggregate revenue requirement and tariff at the end of each Control Period.

8. Filing under MYT Period. – (1) Every generating business/company or transmission business/licensee or distribution business/licensee shall file, on or before 30th November of each year, the following applications during the Control Period:

- a) Petition for approval of ARR and determination of tariff for ensuing year.
- b) Petition for Truing up of ARR for the previous year:

Provided that Truing up for years of the previous Control Period shall be carried out under respective Tariff Regulations.

- (2) Failure to file the Petition within the stipulated time may attract the provisions of Section 142 and Section 146 of the Act.
- (3) In case the generation business/company or transmission business/licensee or distribution business/licensee does not file the application under these regulations within one month of stipulated date, the Commission may, on its own initiate proceedings for tariff determination.
- (4) The applicant shall submit the forecast of aggregate revenue requirement and tariff proposal for the ensuing financial year, in such manner, and within such time limit as specified in these Regulations:

Provided that the formats for furnishing information for calculating expected revenue and expenditure and for determining tariff shall be as per **Annexure- IX** to these Regulations.
- (5) 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.
- (6) The applicant shall develop the aggregate revenue requirement based on the data and reasonable forecast of the behaviour of individual variables that comprise the aggregate revenue requirement during the Control Period.
- (7) The applicant shall develop the forecast of expected revenue from existing tariff and charges based on the following:
 - (a) In the case of generating business/company, estimates of generation capacity allocated to distribution business/licensees and expected electricity generation by each Unit/Station for ensuing year;
 - (b) In the case of transmission business/licensee, estimates of transmission capacity allocated to Users of the transmission system and expected energy to be transmitted for ensuing year;

- (c) In the case of distribution business/licensee, estimates of contracted demand and quantum of electricity to be supplied to consumers and to be wheeled on behalf of Users of the distribution system for ensuing year;
 - (d) Prevailing tariffs and charges as on the date of making the application.
- (8) Based on the forecast of aggregate revenue requirement and expected revenue from existing tariff and charges, the generating business/company or transmission business/licensee or distribution business/licensee shall submit the means for meeting the gap, if any, in the aggregate revenue requirement including efficiency gains, tariff increase or any other means, with complete details of such measures.
- (9) The Application shall include the following:
 - (a) A statement of the existing schedule of tariff and terms and conditions of tariff and expected revenue from the existing tariff and charges for the ensuing year or the period for which the tariff and charges are to be determined;
 - (b) A statement containing full details of subsidy received, or due from the State Government, if any, the consumers to whom it is directed, and showing how the subsidy is reflected in the existing and proposed tariff applicable to those consumers;
 - (c) A statement of the estimated change in annual revenues that would result from the proposed tariff changes in the period in which they are to be implemented;
 - (d) The audited accounting statements for the previous year and in case the audited accounting statements for the previous year are not available, the audited accounting statements for the year immediately preceding the previous year along with the unaudited accounting statements for the previous year;
 - (e) In case of distribution business/licensee, if the proposed tariff is to be introduced after the start of a financial year, a statement of the proportion of revenue expected and quantities of electricity supplied under each proposed tariff modification during the remaining months of the financial year shall be included;

- (f) In case of distribution business/licensee, detailed calculations of voltage-wise cost of supply in respect of each category of consumer;
 - (g) A statement showing calculations of the amount of cross subsidy in the existing tariff and in the proposed tariff in respect of each category of consumer;
 - (h) An explanatory note giving the rationale for the proposed tariff changes;
 - (i) If the transmission business/licensee or distribution business/licensee is engaged in any other business, as specified under regulation 56 and 76, respectively, the transmission business/licensee or distribution business/licensee shall submit the following information:
 - (i) Name and description of all other businesses that the Licensee is engaged in;
 - (ii) For each such other business, amount of revenue generated in the previous year, estimated during the current year and projected for the ensuing year;
 - (iii) Assets and resources of licensed business used by the Licensee to generate the above revenue;
 - (iv) Expenses incurred to generate the above revenue, separately for each other Business;
 - (v) Proportion of such expenses included in the ARR of the Licensee, if any, basis of apportionment, and justification for the basis of apportionment.
 - (j) Any other information, as required by the relevant Licence or desired by the Commission.
- (10) If a person holds more than one Licence, he shall submit separate calculations as above in respect of each Licence.
- (11) The generating business/ company shall submit generating station-wise calculations, except for small hydro generating stations, which may be combined:

Provided that in case of a licensee having more than one area of supply, he shall submit separate calculation for each area of supply.

- (12) In case the distribution licensee owns and operates a generating station it shall maintain and submit separate accounts of generation, its licensed business, and other business, and in the absence of separate accounts, the basis of apportionment and justification for the basis of apportionment shall be submitted.
- (13) The tariff determined for a particular financial year shall remain applicable only till end of such financial year, unless the Commission approves the continuation of such tariff for subsequent periods.
- (14) Soft copy of the ARR and Tariff Petitions along with linked spread sheet financial models shall also be submitted along with the Petition to the Commission.

9. Specific trajectory for certain variables. –The Commission may stipulate a trajectory for certain variables such as transmission losses, supply availability, distribution losses and collection efficiency over the Control Period, while approving the ARR and Tariff Petition, in addition to the norms specified in these Regulations.

10. Controllable and uncontrollable factors. – (1) For the purpose of these Regulations, the term “uncontrollable factors” shall comprise of the following factors which were beyond the control of, and could not be mitigated by the applicant, as determined by the Commission:

- (a) Force majeure events;
- (b) Change in law, judicial pronouncements and Orders of the Central Government, State Government or Commission;
- (c) Economy wide influences such as unforeseen changes in inflation rate, taxes and statutory levies;
- (d) Variation in fuel cost on account of variation in coal, oil and all primary/secondary fuel prices;

- (e) Variation in the cost of power purchase due to additional short-term power purchase for some special circumstances specified in regulation 70;
 - (f) Taxes on Income;
 - (g) Variation in Interest rates;
 - (h) Variation in number of consumers or mix of consumers or quantities of electricity supplied to the consumers.
- (2) The controllable factors include, but are not limited to, the following:
- (a) Variations in capital expenditure on account of time and/or cost overruns/ efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events;
 - (b) Capital cost over-run due to delay by equipment supplier;
 - (c) Variations in capital expenditure on account of time and/or cost over-runs on account of land acquisition issues;
 - (d) Gross station heat rate;
 - (e) Secondary fuel oil consumption;
 - (f) Auxiliary energy consumption; and
 - (g) Operation & maintenance expenses;
 - (h) Variation in supply availability;
 - (i) Variation in performance parameters;
 - (j) Variation in distribution loss;
 - (k) Variation in collection efficiency;
 - (l) Variation in interest on working capital;
 - (m) Provision for bad debts.

11.Mechanism for pass through of gains or losses on account of uncontrollable factors. – (1) The approved aggregate gain or loss to the

generating business/company or transmission business/licensee or distribution business/licensee on account of uncontrollable factors shall be passed through after prudence check as an adjustment in the tariff of the generating business/company or transmission business/licensee or distribution business/licensee over such period as may be stipulated in the Order of the Commission passed under these Regulations.

- (2) The generating business/company or transmission business/licensee or distribution business/licensee shall submit details of the variation between expenses incurred and revenue earned and the figures approved by the Commission, in the format specified by the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission.
- (3) Nothing contained in this regulation shall apply in respect of any gain or loss arising out of variation in the price of fuel and power purchase, which shall be dealt with as specified by the Commission in regulation 43(6) and regulation 78 of these Regulations.

12. Mechanism for sharing of gains or losses on account of controllable factors. – (1) The approved aggregate gain to the generating business/company or transmission business/licensee or distribution business/licensee on account of controllable factors shall be dealt with in the following manner:

- (a) One-third of the amount of such gain may be passed on to consumers as a rebate in tariffs;
- (b) The balance amount, which shall amount to two-third of such gain, may be utilised at the discretion of the generating business/company or transmission business/licensee or distribution business/licensee:

Provided that the net gain or loss to the generating business/company on account of normative operational parameters specified in regulation 41(3) to 41(5) of these Regulations shall be shared as specified in regulation 35 of these Regulations.

- (2) The approved aggregate loss to the generating business/company or transmission business/licensee or distribution business/licensee on

account of controllable factors shall be to the account of the respective Utility.

13. Truing Up. – (1) The aggregate revenue requirement and expected revenue from tariff and charges of a generating business/company or transmission business/licensee or distribution business/licensee shall be subject to truing up of expenses and revenue in accordance with these regulations.

(2) The generating business/company or transmission business/licensee or distribution business/licensee shall file an application for truing up ARR and ERC of the previous year and determination of ARR and tariff for the ensuing year, within the time limit specified in these Regulations:

Provided that the generating business/company or transmission business/licensee or distribution business/licensee, as the case may be, shall submit to the Commission information in such form as may be specified in **Annexure-IX** by the Commission, together with the audited accounts 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 expected revenue from tariff and charges and the prudence of the same.

Provided that the ARR and truing up Petition shall be with reference to figures approved by the Commission for the previous year.

(3) The truing up shall be a comparison of the financial and operational performance of the generating business/company or transmission business/licensee or distribution business/licensee with the approved forecast of aggregate revenue requirement and expected revenue from tariff and charges and operational performance and shall comprise of the following:

(a) Comparison of the audited performance of the applicant for the previous financial year with the approved forecast for such previous financial year, subject to prudence check;

- (b) Computation of the gains and losses on account of controllable and uncontrollable factors for the previous year;
 - (c) The resultant revenue gap/surplus shall be adjusted as per the order of the Commission;
 - (d) Review of compliance with directives issued by the Commission from time to time;
 - (e) Other relevant details, if any.
- (4) Under the truing up exercise, the variation in the components of ARR and ERC may be attributed to controllable factors or to uncontrollable factors, as specified in regulation 10 of these Regulations.
- (5) The Truing Up order shall comprise of:
- (a) the approved aggregate gain or loss to the generating business/company or transmission business/licensee or distribution business/licensee on account of controllable factors, and the amount of such gains or such losses that may be shared in accordance with regulation 12 of these Regulations;
 - (b) Components of approved cost pertaining to the uncontrollable factors, which were not recovered during the previous year, to be passed through as per regulation 11 of these Regulations;
 - (c) the revenue gap or revenue surplus to be carried forward to the ensuing year.

CHAPTER – IV

PROCEDURE FOR DETERMINATION OF TARIFF

14.Procedures relating to making an Application for determination of Tariff.- An application for determination of tariff shall be made in such form and in such manner as specified in these Regulations and accompanied by such fees as may be specified by the Commission.

15.Determination of Generation Tariff. – (1) The Commission shall determine the tariff for generation of electricity, in accordance with the terms and conditions contained in **Chapter VI** of these Regulations.

(2) Existing generating station:

- (a) Where the Commission has, at any time prior to the date of coming into effect of these Regulations, approved a power purchase agreement or arrangement between a generating business/company and a distribution business/licensee or has adopted the tariff contained therein for supply of electricity from an existing generating Unit/station, the tariff for supply of electricity by the generating business/company to the distribution business/licensee shall be in accordance with arrangement for such period as may be approved or adopted by the Commission or tariff mentioned in such power purchase agreement;
- (b) Where, as on the date of coming into effect of these Regulations, the power purchase agreement or arrangement between a generating business/company and a distribution business/licensee for supply of electricity from an existing generating 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, the supply of electricity by such generating business/company to such distribution business/licensee after the date of coming into effect of these Regulations shall be in accordance with the power purchase agreement or arrangement to be approved by the Commission:

Provided that an application for approval of such power purchase agreement or arrangement shall be made by the distribution business/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 such power purchase agreement and shall be discontinued forthwith if the Commission rejects, for reasons recorded in writing, such power purchase agreement or arrangement:

Provided that such approval shall not be required in case of purchase of power based on Central allocation of generation capacity of central generating stations to the State.

(3) New generating stations - The tariff for the supply of electricity by a generating business/company to a distribution business/licensee from a new generating Unit/station shall be in accordance with power purchase agreement approved by the Commission.

(4) Own generating stations

(a) Where the distribution business/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 his retail supply business shall be determined by the Commission:

(b) The distribution business/licensee shall maintain separate records 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 capital employed in such business:

Provided that the ARR and truing up Petition shall be with reference to figures approved by the Commission for the previous year.

(c) The distribution licensee shall submit, along with the separate application for determination of tariff for retail supply of electricity, the information required under **Chapter VI** of these Regulations relating to the generation business.

16. Determination of Tariff for Transmission Business/Licensee and Distribution Business/Licensee. – (1) The Commission shall determine the tariff for the transmission business/licensee and distribution business/licensee based on an application made by the Licensee in accordance with the procedure contained in these Regulations.

(2) The Commission shall determine the tariff for:

(a) Transmission business/licensee, in accordance with the terms and conditions contained in **Chapter VII** of these Regulations;

- (b) Distribution business/licensee, in accordance with the terms and conditions contained in **Chapter VIII** of these Regulations.
- (3) The applicant shall provide, as part of his application to the Commission, in such form as specified in **Annexure-IX** to these Regulations, full details of his calculation of the aggregate revenue requirement and expected revenue from tariff and charges pursuant to the terms of his licence, 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:
- (4) 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 relevant year/s of the Control Period:
- (5) The Commission may stipulate 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. Procedure for admission of application, publishing of notice, filing of suggestions and objections, and hearing. – (1) 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 Commission or the Secretary or the designated Officer shall intimate to the applicant that the application is admitted and ready for publication.

- (2) The applicant shall, within seven days after admission of the application, publish a notice containing summary of application, in at least one (1) English and two (2) Malayalam language daily newspapers having wide circulation in the area to which the application pertains.
- (3) The suggestions and objections, if any, on the proposal for determination of aggregate revenue requirement and tariff, may be filed before the Secretary, Kerala State Electricity Regulatory Commission, by any

person within 20 days of publication of such notice with a copy to the applicant.

- (4) The applicant shall, within 7 days from the date of publication of the notice as aforesaid, submit to the Commission on affidavit the details of the notice published and shall also file copies of the newspapers wherein the notice has been published.
- (5) The applicant shall file his comments on the suggestions and objections, if any, received on the proposal, within 15 days of receipt of suggestions and objections.
- (6) The Commission will thereafter follow, as far as may be practicable, the procedure specified in Chapter III of the Kerala State Electricity Regulatory Commission (Conduct of Business) Regulations, 2003 for hearing on ERC filing and for passing orders.

18. Tariff Order. – (1) The Commission shall, within one hundred and twenty (120) days from the date of admission of a complete application and after considering all suggestions and objections received from the public:

- (a) issue a Tariff Order accepting the application with such modifications or such conditions as may be specified in that Order; or
- (b) 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 thereunder 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.

- (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.

19. Adherence to Tariff Order. – (1) No tariff or part of any tariff may be ordinarily amended, more frequently than once in any financial year, in the manner as specified in regulation 43(6) and regulation 78.

- (2) The Commission, may, after satisfying itself for reasons to be recorded in writing, allow for the revision of tariff.
- (3) If the generating business/company or transmission business/licensee or distribution business/licensee recovers a price or charge exceeding the tariff determined under Section 62 of the Act and in accordance with these Regulations, the excess amount shall be payable to the person who has paid such price or charge, along with interest equivalent to the bank rate of the Reserve Bank of India without prejudice to any other liability incurred by such generating business/company or transmission business/licensee or distribution business/licensee.
- (4) The generating business/company or transmission business/licensee or distribution business/licensee shall submit quarterly returns as may be required by the Commission, containing operational and cost data to enable the Commission to monitor the implementation of its Order.

CHAPTER – V FINANCIAL PRINCIPLES

20. Capital Cost and capital structure. – (1) In case of existing projects, the capital cost admitted by the Commission prior to 01.04.2015 including additional capitalisation, expenditure projected for the respective year of the Control Period, shall form the basis for determination of tariff.

- (2) Capital cost for a project shall include:
 - (a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange rate 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) capitalised initial spares subject to the ceiling rates specified in these Regulations; and
 - (c) additional capitalisation determined under regulation 21:

Provided that the assets forming part of the project but not put to use or not in use, shall be taken out of the capital cost.

- (3) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff;
- (4) The approved capital cost shall be considered for determination of tariff and if sufficient justification is provided for any escalation in the capital cost, the same may be considered by the Commission subject to 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 business/company or transmission business/licensee or Distribution Business/Licensee.

- (5) Where power purchase agreement or bulk power transmission agreement provides for a ceiling of capital cost, the capital cost to be considered shall not exceed such ceiling.
- (6) The capital cost may include capitalised initial spares as a percentage of the Plant and Machinery cost upto cut-off date, subject to the ceiling norms specified in **Annexure-VI**, as may be revised by the Commission from time to time:

Provided that 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:

Provided further that 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:

Provided further that 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, cost of land and cost of civil works.

- (7) Impact of revaluation of assets, if any, may be considered by the Commission after prudence check.
- (8) Any expenditure on replacement, renovation and modernization or extension of life of old fixed assets, as applicable to generating business/company, transmission business/licensee, and distribution

business/licensee, shall be considered after writing off the net value of such replaced assets from the original capital cost, and shall be calculated as follows:

$$\text{Net Value of Replaced Assets} = \text{OCFA} - \text{AD} - \text{CC};$$

Where;

OCFA: Original Capital Cost of Replaced Assets;

AD: Accumulated depreciation pertaining to the Replaced Assets;

CC: Total Consumer Contribution pertaining to the Replaced Assets;

Explanation – for the purpose of these Regulations, the term renovation and modernization shall have the same meaning as in Section 80 IA of the Income-tax Act, 1961.

21. Additional capitalization. – (1) The following capital expenditure, actually incurred after the date of commercial operation and up to the cut-off date and duly audited, on the following counts within the original scope of work, may be admitted by the Commission subject to prudence check:

- (a) Due to un-discharged liabilities;
- (b) On works deferred for execution;
- (c) To meet award of arbitration or compliance of final and un-appealable Order or decree of a court;
- (d) On account of change in law;
- (e) On procurement of initial spares included in the original project costs subject to the ceiling norm laid down in **Annexure-VI** to these Regulations;
- (f) Any additional works/services, which have become necessary for efficient and successful operation of a generating station or a transmission system or a distribution system but not included in the original capital cost:

Provided that the details of the work included in the original scope of work along with estimates of expenditure shall be submitted along with the application for provisional tariff:

Provided further that a list of the un-discharged liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the generating Unit/Station or transmission system or distribution system:

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

Note 1

Any expenditure admitted on account of un-discharged liabilities within the original scope of work and the expenditure deferred on techno-economic grounds but falling within the original scope of work shall be serviced in the normative debt-equity ratio specified in regulation 24.

Note 2

Any expenditure admitted by the Commission for determination of tariff on account of new works not in the original scope of work shall be serviced in the normative debt-equity ratio specified in regulation 24.

Note 3

Any expenditure admitted by the Commission for determination of tariff on renovation, modernization, life extension and restoration of assets damaged due to natural calamities shall be serviced in the normative debt-equity ratio specified in regulation 24 after writing off the original amount of the replaced assets from the original cost.

- (2) Impact of additional capitalization on tariff, if any, shall be considered at the time of Truing Up for each financial year.

22. Interest During Construction (IDC). – (1) Interest during construction shall be computed corresponding to the loan from the date of infusion of debt funds, and after taking into account the prudent phasing of funds upto Scheduled Date of Commercial Operation.

- (2) In case of additional costs on account of Interest During Construction due to delay in achieving the scheduled date of commercial operation, the generating business/company or the transmission business/company

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 business/company or the transmission business/company and is due to uncontrollable factors as specified in regulation 34 of these regulations, Interest During Construction may be allowed after due prudence check:

Provided further that Interest during Construction only on actual loan may be allowed beyond the scheduled date of commercial operation to the extent the delay is found beyond the control of the generating business/company or the transmission business/company after due prudence check and taking into account prudent phasing of funds.

23. Consumer Contribution, Deposit Work, Capital Subsidy and Grant. –

(1) The following nature of work carried out by the transmission business/licensee or distribution business/licensee shall be classified under this category:

- (a) Capital works undertaken after obtaining a part or all of the funds from the users/consumers in the context of deposit works, consumer contribution, capital subsidies or grants;
- (b) Capital works undertaken by utilising capital subsidies or grants received from the State and/or Central Governments;
- (c) Any other capital subsidy or grant of similar nature received without any obligation to return the same and with no interest costs attached to such subvention.

(2) The expenses on such capital expenditure shall be treated as follows:

- (a) Normative O&M expenses as specified in these Regulations shall be allowed.
- (b) Provisions related to depreciation, as specified in regulation 25, shall not be applicable to the extent of financial support provided through consumer contribution, deposit work, capital subsidy, and grant.

- (c) Provisions related to return on equity, as specified in regulation 26 shall be not applicable to the extent of financial support provided through consumer contribution, deposit work, capital subsidy, and grant.

24. Debt-equity ratio. – (1) For the purpose of determination of tariff, debt-equity ratio as on date of commercial operation in case of a new generating station, transmission line and distribution line or substation commissioned or capacity expanded on and/or after 1.4.2015, shall be 70:30 of the approved capital cost:

Provided that the debt:equity ratio shall be considered after deducting the financial support provided through consumer contribution, deposit work, capital subsidy, and grant.

- (2) Where equity employed is more than 30% of the approved capital cost, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as normative loan and interest on the same may be allowed at the weighted average rate of interest of the actual loan portfolio.
- (3) Where actual equity employed is less than 30% of the approved capital cost, the actual equity shall be considered.
- (4) If any fixed asset is capitalised on account of capital expenditure incurred prior to April 1, 2015, debt-equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2015 shall be considered.
- (5) The equity invested in foreign currency shall be designated in equivalent Indian rupees as on the date of each investment.
- (6) In the case of retirement or replacement of 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.
- (7) Swapping of foreign currency loans shall be permitted provided it does not have the effect of increasing the tariff. Cost of swapping and interest expenses thereafter, shall be considered by the Commission after prudence check. The generating business/company or transmission

business/licensee or distribution business/licensee shall provide full particulars of the swapped loans.

- (8) Restructuring of capital in terms of relative share of equity and loan shall be permitted during the life of the project provided it does not have the effect of increasing the tariff. Any benefit from such restructuring shall be shared equally between the generating business/company and the persons sharing the capacity charge or transmission business/licensee and long-term intra-State open access customers including distribution business/licensee or distribution business/licensee and consumers.

25. Depreciation. – (1) The value base for the purpose of depreciation shall be the approved original capital cost of the asset admitted by the Commission.

- (2) The generation business/company or transmission business/licensee or distribution business/licensee shall be permitted to recover depreciation on the value of fixed assets used in their respective business, computed in the following manner:

- (a) Depreciation shall be computed annually based on the straight line method at the rates specified in the **Annexure- I** to these Regulations for the first 12 years from the date of commercial operation:

Provided that the remaining depreciable value as on 31st March of the year ending after a period of 12 years from the date of commercial operation shall be spread over the balance useful life of the assets as specified in **Annexure- I**:

Provided further that the generating business/company or transmission business/licensee or distribution business/licensee, shall submit all such details or documentary evidence, as may be required under these Regulations and as stipulated by the Commission from time to time, to substantiate the above claims;

- (b) The salvage value of the asset shall be considered at 10 per cent of the allowable capital cost and depreciation shall be allowed upto a maximum of 90 per cent of the allowable capital cost of the asset.

- (3) The generating business/company or transmission business/licensee or distribution business/licensee shall be allowed to claim depreciation to the extent of financial support, including the loan and equity contribution, provided by them:

Provided that depreciation shall not be allowed on assets funded through consumer contribution, deposit works, capital subsidies, and grants.

- (4) In case of existing assets, the balance depreciable value as on April 1, 2015, shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto March 31, 2015, from the gross depreciable value of the assets.

- (5) Depreciation shall be chargeable from the first year of commercial operation:

Provided that in case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis:

Provided further that depreciation shall be re-calculated for assets capitalised during the year at the time of Truing Up, based on documentary evidence of assets capitalised submitted by the applicant, subject to the prudence check of the Commission, such that the depreciation is calculated proportionately from the date of capitalisation.

- (6) In case a single tariff needs to be determined for all the Units of generating station, the depreciation shall be computed from the effective date of commercial operation taking into consideration the depreciation of individual generating Units thereof.

26. Return on Equity. – (1) Return on Equity shall be computed in rupee terms, on the paid up equity capital determined in accordance with the regulation 24 and shall be allowed at the rate of 14% for generating business/companies, transmission business/licensee, and distribution business/licensee:

Provided that for generating business/company, transmission business/licensee and distribution business/licensee, return on equity shall be allowed on the amount of allowed equity capital for the assets put to use at the commencement of financial year and on 50% of equity

capital portion of the allowable capital cost for the investment put to use during the financial year:

Provided further that at the time of truing up for the generating business/company, transmission business/licensee and distribution business/licensee, return on equity shall be allowed on pro-rata basis based on documentary evidence provided for the assets put to use during the year.

- (2) If the equity invested in the regulated generating business/company or transmission business/licensee or distribution business/licensee is not clearly identifiable, return on Net Fixed Assets of the generation business/company or the distribution business/licensee for the regulated business at the beginning of the year, shall be allowed at the rate of 3%.

Provided that Net Fixed Assets shall exclude the assets created out of consumer contribution, deposit works, capital subsidy, and grants.

27. Interest and Finance Charges. – (1) The loans arrived at in the manner indicated in regulation 24 shall be considered as gross normative loan for calculation of interest on loan:

Provided that interest and finance charges on capital works in progress shall be excluded:

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

- (2) The normative loan outstanding as on April 1, 2015, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2015, from the normative loan.
- (3) The repayment for the year shall be deemed to be equal to the depreciation allowed for that year.
- (4) Notwithstanding any moratorium period availed by the generating business/company or the transmission business/licensee or the distribution business/licensee, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for that year.

- (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 business/company or the transmission business/licensee or the distribution business/licensee:

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 regulated business of the generating business/company or the transmission business/licensee or the distribution business/licensee, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee or the distribution licensee as a whole shall be considered.

- (6) The interest on loan shall be calculated on the normative average loan for the year by applying the weighted average rate of interest.
- (7) The generating business/company or the transmission business/licensee or the distribution business/licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared equally between the beneficiaries and the generating business/company or the transmission business/licensee or the distribution business/licensee.
- (8) The changes to the terms and conditions of the loans during the year, if any, shall be reflected from the date of coming into effect of such changes.
- (9) Interest shall be allowed on the amount held as security deposit in cash from Users of the transmission system or distribution system and consumers at the bank rate as on 1st April of the financial year in which the Petition is filed:

Provided that interest on security deposit actually paid to the Users of the transmission system or distribution system and consumers during the year, shall be considered at the time of truing up for the year.

28. Tax on Returns. – (1) The Commission shall provisionally approve Income Tax payable for ensuing year, if any, based on the actual income tax paid on permissible return on equity or return on Net Fixed Assets, as allowed by the Commission relating to the generating business/company or transmission business/licensee or distribution business/licensee, as the case may be, as per latest audited accounts available for the applicant, subject to prudence check, which shall be directly recovered from the beneficiaries:

Provided that no Income Tax shall be considered on the amount of efficiency gains and incentive earned by the generating business/company or transmission business/licensee or distribution business/licensee:

Provided further that the generating business/company or transmission business/licensee or distribution business/licensee shall bill the Income Tax under a separate head called "Income Tax Reimbursement" in their respective bills.

(2) Variation between Income Tax actually paid and approved, if any, on the income stream of the regulated business of generating business/company or transmission business/licensee or distribution business/licensee shall be reimbursed to/recovered from the generating business/company or transmission business/licensee or distribution business/licensee based on the documentary evidence submitted at the time of truing up, subject to prudence check.

(3) Under-recovery or over-recovery of any amount from the beneficiaries or the consumers on account of such income tax having been passed on to them shall be on the basis of income-tax assessment under the Income-Tax Act, 1961, as certified by the statutory auditors. The generating business/company or transmission business/licensee or distribution business/licensee, as the case may be, may include this variation in its Petition for truing up:

Provided that income-tax allocated to the thermal generating station shall be charged to the beneficiaries in the same proportion as annual fixed charges, and the income-tax allocated to the hydro generating station shall be charged to the beneficiaries in the same proportion as annual capacity charges, and in case of transmission business/licensee, the sharing of income-tax shall be in the same proportion as annual

transmission charges, and in case of distribution business/licensee, the sharing of income-tax shall be in the proportion of monthly bill:

Provided further that tax on any income stream from other than the business regulated by the Commission shall not constitute a pass through component in tariff and tax on such other income shall be borne by the generating business/company or transmission business/licensee or distribution business/licensee, as the case may be.

29. Interest on Working Capital. – (1) The generation business/company or transmission business/licensee or distribution business/licensee shall be allowed interest on the normative level of working capital for the year, computed as under:

1) Generation:

(a) Liquid fuel based generating stations:

- (i) Liquid fuel stock for one month corresponding to actual generation; plus
- (ii) Operation and maintenance expenses for one (1) month; plus
- (iii) Maintenance spares at one (1) per cent of the historical cost; plus
- (iv) Receivables equivalent to one (1) month of fixed charge and energy charge for sale of electricity calculated at actual generation:

Provided that in case of own generating stations, no amount shall be allowed towards receivables, to the extent of supply of power by the generation business to the distribution business, in the computation of working capital in accordance with these Regulations.

(b) Gas Turbine/Combined Cycle generating stations:

- (i) Fuel cost for one (1) month corresponding to actual generation; plus

- (ii) Liquid fuel stock for one month corresponding to actual generation; plus
- (iii) Operation and maintenance expenses for one (1) month; plus
- (iv) Maintenance spares at one (1) per cent of the historical cost; plus
- (v) Receivables equivalent to one (1) month of fixed charge and energy charge for sale of electricity calculated at actual generation:

Provided that in case of own generating stations, no amount shall be allowed towards receivables, to the extent of supply of power by the generation business to the distribution business, in the computation of working capital in accordance with these Regulations.

(c) Hydro power generating stations:

- (i) Operation and maintenance expenses for one (1) month; plus
- (ii) Maintenance spares at one (1) per cent of the historical cost; plus
- (iii) Receivables equivalent to one (1) month of fixed cost:

Provided that in case of own generating stations, no amount shall be allowed towards receivables, to the extent of supply of power by the generation business to the distribution business, in the computation of working capital in accordance with these Regulations.

2) Transmission Business/Licensee:

- (i) Operation and maintenance expenses for one (1) month; plus
- (ii) Maintenance spares at one (1) per cent of the historical cost; plus
- (iii) Receivables equivalent to one (1) month of transmission charges calculated on target availability;

Less:

- (iv) Amount, if any, held as security deposits except the security deposits held in the form of Bank Guarantee from Users of the transmission system.

3) Distribution Business/Licensee:

- (i) Operation and maintenance expenses for one (1) month; plus
- (ii) Maintenance Spares equal to one-twelfth of the sum of the book value of stores, materials and supplies at the end of each month of the financial year; plus
- (iii) Receivables equal to one and half month's equivalent of the expected revenue from sale of electricity at the prevailing tariff;

Less:

- (iv) Amount, if any, held as security deposits except the security deposits held in the form of Bank Guarantee from Users of the distribution system and consumers;

Less:

- (v) One month equivalent of cost of power purchased, based on the approved power purchase cost:

Provided that the one month equivalent of cost of power purchased corresponding to the extent of supply of power from Distribution Licensee's own Generating Station shall not be deducted:

Provided further that for distribution business/licensees who supply electricity to their consumers on prepaid metering system, no interest on working capital shall be allowed.

- (2) Interest on normative working capital shall be allowed at a rate equal to the State Bank Base Rate (SBBR) as on 1st April of the financial year in which the ARR Petition is filed.

CHAPTER – VI GENERATION

30. Applicability. – (1) The Regulations contained in this Chapter shall apply for determination of tariff for supply of electricity to the distribution business/licensee from conventional sources of generation such as gas, liquid fuel, medium and large scale hydro plants:

Provided that determination of tariff for supply of electricity to the distribution business/licensee from cogeneration plants, renewable energy sources of generation and solar plants shall be governed by separate regulations notified by the Commission from time to time.

(2) The Commission shall be guided by the terms and conditions contained in this Chapter in determining the tariff for supply of electricity by the generating business/company to the distribution business/licensee in the following cases:

- a) where such tariff is pursuant to a power purchase agreement or arrangement entered into subsequent to the date of coming into effect of these Regulations; or
- b) where such tariff is pursuant to a power purchase agreement or arrangement entered into prior to the date of coming into effect of these Regulations and either the Commission has not previously approved such agreement/arrangement or the agreement/arrangement envisages that the tariff shall be based on the KSERC (Tariff) Regulations, 2003, the KSERC (Terms and Conditions of Tariff for Retail Sale of Electricity) Regulations, 2006, and the KSERC (Terms and Conditions for Determination of Tariff for Distribution and Retail Sale of Electricity under MYT Framework) Regulations, 2006, including amendments thereto as the case may be; or
- c) where the Distribution Licensee is engaged in the business of generation of electricity, in determining the transfer price at which electricity is supplied by the generation business to the distribution business/licensee.

31. Prudence Check of Capital Cost. – (1) The following principles shall be adopted for prudence check of capital cost of the new projects:

- a) In case of the thermal generating station, prudence check of capital cost may be carried out taking into consideration the benchmark norms specified by the CERC from time to time:

Provided that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the capital expenditure, financing plan, interest during construction, etc., for its reasonableness, use of efficient technology, cost over-run and time over-run, competitive bidding for procurement and such other matters as may be considered appropriate by the Commission for determination of tariff:

Provided further that in cases where benchmark norms have been specified, the generating company shall submit the reasons for exceeding the capital cost from benchmark norms to the satisfaction of the Commission for allowing cost above benchmark norms.

- b) The Commission may issue guidelines for vetting of capital cost of hydro-electric projects by an independent agency or an expert and in that event the capital cost as vetted by such agency or expert may be considered by the Commission while determining the tariff for the hydro generating station.

32. Capital Cost. – (1) Capital Cost for a new project shall include:

- a) the expenditure incurred or projected to be incurred, any gain or loss on account of foreign exchange rate 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 loan component considered in accordance with the debt-equity ratio specified under regulation 24;
- c) Increase in cost of contract packages as approved by the Commission;

- d) capitalised initial spares subject to the ceiling rates specified in **Annexure VI**;
- e) additional capitalisation determined under regulation 21;
- f) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD:

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

- (2) The Capital cost of an existing project shall include the following:
 - a) the capital cost admitted by the Commission prior to 01.04.2015 duly trued up by excluding liability, if any, as on 01.04.2015;
 - b) Additional capitalization for the respective year as determined in accordance with regulation 21; and
 - c) Expenditure on account of renovation and modernisation as admitted by the Commission in accordance with regulation 33.
- (3) The capital cost in case of new hydro generating station shall also 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 contribution towards development activities, if any, in the affected area, as may be considered by the Commission.
- (4) In relation to multi-purpose hydroelectric Projects, with irrigation, flood control and power components, the capital cost chargeable to the power component of the Project only shall be considered for determination of tariff.

33. Renovation and Modernisation. – (1) The generating business/company, for meeting the expenditure on renovation and modernization for the purpose of extension of life beyond the useful life of the generating station or a generating Unit thereof, 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 Business/Company.

- (2) Where the generating business/company 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.
- (3) 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.

34. Petition for determination of Generation Tariff for existing and new Generation Station or generating Unit. – (1) 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, as the case may be, as to generating stations.

- (2) Where the tariff is being determined for Stage or generating 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 generating Units, as the case may be:

Provided that the generation business/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.

(3) In case of an existing generating station, the application shall be made not later than 180 days from the date of notification of these regulations based on admitted capital cost including any additional capital expenditure already admitted up to 31.3.2015 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the ensuing years.

(4) In case of existing projects, the generation business/company may be allowed tariff by the Commission based on the admitted capital cost as on 01.04.2015 and projected additional capital expenditure for the ensuing years:

Provided that the generation business/company shall continue to bill the beneficiaries at the tariff approved by the Commission and applicable as on 31.3.2015 for the period starting from 1.4.2015 till approval of tariff by the Commission in accordance with these Regulations;

(5) The generation business/company shall file the Petition for determination of provisional tariff for new generating station 180 days prior to the anticipated date of commercial operation of generating Unit or stage or generating station as a whole, as the case may be.

(6) The generation business/company shall make an application for determination of tariff based on capital expenditure incurred or projected to be incurred up to the date of commercial operation and additional capital expenditure incurred, duly certified by the statutory auditors:

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

(7) In case of new projects, the generating company may be allowed provisional tariff by the Commission based on the projected capital expenditure from the anticipated COD.

(8) If the date of commercial operation is delayed beyond 180 days from the date of issue of tariff order, the tariff granted shall be deemed to have been withdrawn and the generation business/company shall be required to file a fresh application for determination of tariff after the date of commercial operation of the project.

- (9) The generation business/company shall file the Petition for determination of final tariff for new generating station within 180 days from the date of commercial operation of generating Unit or stage or generating station as a whole, as the case may be based on the audited capital expenditure and capitalisation as on the date of commercial operation.
- (10) Where the capital cost considered in tariff by the Commission on the basis of projected capital cost as on COD or the projected additional capital expenditure exceeds the actual capital cost incurred on year to year basis by more than 5%, the generation business/company shall refund to the beneficiaries the excess tariff realised corresponding to excess capital cost, as approved by the Commission along with interest at 1.20 times of the base rate of State Bank of India as prevalent on 1st April of the respective year plus 350 basis points.
- (11) Where the capital cost considered in tariff by the Commission on the basis of projected capital cost as on COD or the projected additional capital expenditure falls short of the actual capital cost incurred on year to year basis by more than 5%, the generation business/company shall be entitled to recover from the beneficiaries the shortfall in tariff corresponding to reduction in capital cost, as approved by the Commission along with interest at 0.80 times of the base rate of State Bank of India as prevalent on 1st April of the respective year plus 350 basis points.

- (2) **Sharing of gains and losses on account of controllable and uncontrollable factors.** – (1) The financial gains and losses computed as per following formulae in case of generating station on account of normative operational parameters specified in regulation 41(3) to 41(5) of these Regulations shall be shared in the ratio of 2/3rd: 1/3rd between the generating station and beneficiaries:

$$\text{Net Gain/(Loss)} = (\text{ECR}_N - \text{ECR}_A) \times \text{actual energy generated,}$$

Where,

ECR_N – Normative Energy Charge Rate computed on the basis of norms specified for Gross Station Heat Rate, Auxiliary Consumption and Secondary Fuel Oil Consumption;

ECR_A – Actual Energy Charge Rate computed on the basis of actual GSHR and Auxiliary Consumption for the month.

- (2) The financial gains and losses of the generation business/company on account of controllable parameters computed under (1) above shall be shared between the generation business/company and the beneficiaries on monthly basis with annual reconciliation.
- (3) The financial gains and losses by the generation business/company on account of uncontrollable parameters shall be passed on to the beneficiaries of the generation business/Company after prudence check.

35. Components of Tariff. – (1) 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.

- (2) The Annual Fixed Charges of 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 percentage share/allocation in the saleable capacity of the generating station.
- (3) The tariff for sale of electricity from a thermal (Liquid Fuel based) generating station shall comprise of two parts, namely, the recovery of Annual Fixed Charges and Energy (variable) Charges.

36. Annual Fixed Charges. – (1) The Annual Fixed Charges shall provide for recovery of the following components:

- (i) Operation & Maintenance Expenses;
- (ii) Depreciation;
- (iii) Interest and finance charges on long-term loans;
- (iv) Interest on Working Capital;
- (v) Return on Equity;

Minus:

- (vi) Non Tariff Income

37. Operation and Maintenance expenses. – (1) For existing generating Stations

- The generation business of KSEB Limited shall be allowed to recover operation and maintenance expenses as per the norms specified below for each year of Control Period for the existing generating stations:

Table 1: O&M Norms for existing generating stations of Generation Business of KSEB Limited (Rs. Crore)

Particular	FY 2015-16	FY 2016-17	FY 2017-18
Employee expenses*	75.27	79.58	84.13
Repair & Maintenance expenses	17.11	18.08	19.12
A & G expenses	3.97	4.19	4.44
Total	96.35	101.85	107.69

* **Note:** Above employee expense norms includes expenses towards payment of pension, and if payment of pension is made through a separate bond, the employee expenses shall be reduced correspondingly

(2) For New Generating Stations

- a) O&M expenses for first year of operation shall be 2% of the original project cost (excluding cost of rehabilitation and resettlement works) for the first year of operation.
- b) The O&M expenses for each subsequent year shall be determined by escalating the base expenses determined above, at the escalation factor of 5.85%.

38. Non-Tariff Income. - (1) The amount of non-tariff income of the generation business/company as approved by the Commission shall be deducted from the Annual Fixed Charges in determining the Annual Fixed Charges of the generation business/company:

Provided that the generation business/company shall submit full details of its forecast of non-tariff income to the Commission along with its application for determination of tariff:

- (2) The indicative list of various heads to be considered for non-tariff income shall be as under:
- (i) Interest on staff loans and advances;
 - (ii) Income from statutory investments;
 - (iii) Income from sale of ash/rejected coal;
 - (iv) Income from rent of land or buildings;
 - (v) Income from sale of scrap;
 - (vi) Income from staff welfare activities;
 - (vii) Rental from staff quarters;
 - (viii) Excess found on physical verification;
 - (ix) Interest on investments, fixed and call deposits and bank balances;
 - (x) Interest on advances to suppliers/contractors;
 - (xi) Income from hire charges from contractors and others;
 - (xii) Income from advertisements, etc.;
 - (xiii) Miscellaneous receipts;
 - (xiv) Interest on delayed or deferred payment on bills;
 - (xv) Rebate from fuel suppliers:

Provided that the interest earned from investments made out of return on equity by the generation business/company shall not be included in non-tariff Income.

39. Norms of operation for Hydro Generating Stations. – (1) Normative Annual Plant Availability Factor (NAPAF) and Normative Annual Plant Load Factor (NAPLF) for recovery of Annual Fixed Charges and Incentive

1) For Existing Hydro Generating Stations:

- (a) NAPAF for the following storage and pondage type hydro generating stations of KSEB Limited where the head variation between Full

Reservoir Level and Minimum Draw Down Level is upto 8% , shall be as under:

Table 2: NAPAF for existing storage and pondage type hydro generating stations of KSEB Limited where head variation is upto 8%

Sl. No.	Station	NAPAF
1.	Idukki	90%
2.	Kuttiady	90%
3.	Pallivasal	90%
4.	Sengulam	90%

Provided that the Commission may revise the norms for NAPAF for the above mentioned Generating Stations in case of Renovation & Modernisation undertaken by the Generating Station:

Provided further that the generating station shall be allowed deemed generation over and above the actual generation for the period the generating station is backed down on the instruction of SLDC:

- (b) NAPAF for the following storage and pondage type hydro generating station where the head variation between Full Reservoir Level and Minimum Draw Down Level is more than 8%, shall be as under:

Table 3: NAPAF for existing storage and pondage type hydro generating stations of KSEB Limited where head variation is more than 8%

Sl. No.	Station	NAPAF
1.	Idamalayar	77%
2.	Kakkad	88%
3.	Panniar	89%
4.	Poringalakuthu	89%
5.	Sabarigiri	90%
6.	Sholayar	89%
7.	Malankara	81%

Provided that the generating station shall be allowed deemed generation over and above the actual generation for the period the generating station is backed down on the instruction of SLDC:

- (c) In case actual generation is higher than the generation at NAPAF, the generating station shall be allowed an incentive of 50 paise/kWh for ex-bus energy generated in excess of ex-bus energy corresponding to NAPAF:

Provided that the deemed generation provision shall not be applicable for the purposes of calculating the incentive.

2) For New Hydro Generating Stations:

- (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 Full Reservoir Level and Minimum Draw Down Level of more than 8%, and where plant availability is not affected by silt, the month-wise peaking capability as provided by the project authorities in the DPR (approved by CEA or the State Government) shall form the basis of fixation of NAPAF;
- (c) Storage and Pondage type plants where plant availability is significantly affected by silt: 85%;
- (d) 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;

(2) Auxiliary Consumption

1) For Existing Hydro Generating Stations:

- a) Normative Auxiliary Consumption including transformation losses for the following existing hydro generating stations of KSEB Limited shall be as under:

Table 4: Normative Auxiliary Consumption for existing hydro generating stations of KSEB Limited

Sl. No.	Station	Type of Station		Auxiliary Consumption (%)
		Surface Hydro / Underground	Excitation System	
1.	Idamalayar	Surface Hydro	Static	0.10%
2.	Idukki	Underground	Static	0.53%
3.	Kakkad	Surface Hydro	Rotating	0.71%
4.	Kuttiady	Surface Hydro	Rotating	0.24%
5.	Lower Periyar	Surface Hydro	Static	0.13%
6.	Neriamangalam	Surface Hydro	Static	0.18%
7.	Pallivasal	Surface Hydro	Brushless	1.00%
8.	Panniar	Surface Hydro	Static	0.53%
9.	Poringalakuthu	Surface Hydro	Brushless	0.44%
10.	Sabarigiri	Surface Hydro	Static	0.22%
11.	Sengulam	Surface Hydro	Static	0.15%
12.	Sholayar	Surface Hydro	Brushless	0.18%

2) For New Hydro Generating Stations:

- a) Auxiliary energy Consumption including transformation losses shall be as under:

Surface hydro electric power generating stations

- i. With rotating exciters mounted on the generator shaft - 0.7%
- ii. With static excitation system: 1%

Underground hydro generating station

- i. With rotating exciters mounted on the generator shaft - 0.9%
- ii. With static excitation system: 1.2%

40. Norms of operation for Liquid Fuel based Generating Stations. – (1) Normative Annual Plant Availability Factor (NAPAF) for recovery of Annual Fixed Charges

- (a) NAPAF for recovery of Annual Fixed Charges for liquid fuel based generating stations of KSEB Limited shall be as under:

Table 5: NAPAF for existing liquid fuel generating stations of KSEB Limited

Sl. No.	Station	NAPAF
1.	Brahamapuram Diesel Power Plant (BDPP)	80%
2.	Kozhikode Diesel Power Plant (KDPP)	80%

Note: Above NAPAF shall be applicable only for peak hours from 1800 hours to 2200 hours

Provided that the Commission may revise the norms for plant availability in case of Renovation & Modernisation undertaken by the Generating Station.

(2) Normative Annual Plant Load Factor (NAPLF) for Incentive

- (a) Liquid fuel based generating stations of Kerala State Electricity Board Limited (KSEB) - 80%

(3) Gross Station Heat Rate

- (a) Normative Gross Station Heat Rate for liquid fuel based generating stations of KSEB Limited shall be as under:

Table 6: Normative Gross SHR for existing liquid fuel generating stations of KSEB Limited

Sl. No.	Station	Heat Rate (kcal/kWh)
1	Brahamapuram Diesel Power Plant (BDPP)	2000
2	Kozhikode Diesel Power Plant (KDPP)	2100

Provided that the Commission may revise the norms for Gross Station Heat Rate in case of Renovation & Modernisation undertaken by the Generating Station.

(b) Gas based/liquid based Generating station achieving COD or after 1.4.2015

= 1.05 x 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, and design cooling water temperature/back pressure.

(4) Auxiliary Consumption

(a) Normative auxiliary consumption for liquid fuel based generating stations of KSEB Limited shall be as under:

Table 7: Normative Auxiliary Consumption for existing liquid fuel generating stations of KSEB Limited

Sl. No.	Station	Auxiliary Energy Consumption (%)
1	Brahamapuram Diesel Power Plant (BDPP)	3.87
2	Kozhikode Diesel Power Plant (KDPP)	1.99

Provided that the Commission may revise the norms for auxiliary consumption for the above mentioned generating stations in case of renovation & modernisation undertaken by the generating station.

(b) Gas Turbine/combined cycle generating stations:

(i) Combined Cycle : 2.5%

(ii) Open Cycle : 1.0%

41.Computation of Capacity Charge and Energy Charge for Hydro generating station. – (1) The Capacity Charge (inclusive of incentive) payable to storage and pondage type hydro generating stations for a calendar month shall be:

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

Where,

AFC = Annual Fixed Charges 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

(2) The PAFM for storage and pondage type hydro generating stations shall be computed in accordance with the following formula:

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

Where,

AUX = Normative auxiliary consumption in percentage

DC_i = 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 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

(3) The Energy Charge for storage and pondage type hydro generating stations 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.

- (4) Energy Charge Rate (ECR) in Rupees per kWh on ex-power plant basis, for storage and pondage type hydro generating stations, shall be determined up to three decimal places based on the following formula, subject to provisions of sub-regulation (6):

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

Where,

$$\text{DE} = \text{Annual Design Energy of the hydro generating station, in MWh}$$

- (5) In case the actual total energy generated by a storage and pondage type hydro generating station during a year is less than the Design Energy for reasons beyond the control of the generating station, the following treatment shall be applied on a rolling basis on an application filed by the Generation Business/Company:

- a) 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 sub-regulation (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 four (4) years on account of hydrology factor, the generating station may approach CEA with relevant hydrology data for revision of design energy of the station.

- b) In case the energy shortfall occurs after ten years from the date of commercial operation of a generating station, the following shall apply:

Explanation : If the specified annual Design Energy 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 sub-regulation (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.

- c) Actual energy generated (e.g. A1, A2) shall be arrived at by multiplying the net metered energy sent out from the station by $100 / (100 - AUX)$.
- (6) In case the Energy Charge Rate (ECR) for a storage and pondage type hydro generating station, computed as per sub-regulation (4) exceeds ninety paise per kWh, and the actual saleable energy in a year exceeds $\{ DE \times (100 - AUX) / 10000 \}$ MWh, the Energy Charge for the energy in excess of the above shall be billed at ninety paise per kWh only:

Provided that in a year following a year in which total energy generated was less than the Design Energy for reasons beyond the control of the Generation Business/Company, the Energy Charge Rate shall be reduced to ninety paise per kWh after the energy charge shortfall of the previous year has been made up.

- (7) The 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.
- (8) The State Load Despatch Centre shall certify the declared capacity of the generating stations on daily basis and shall also issue a Certificate at the end of the year, validating the PAFM during the year, to the Generating Business/Company.
- (9) The Energy Charge for run of the river type hydro generating stations 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.
- (10) Energy Charge Rate (ECR) in Rupees per kWh on ex-power plant basis, for run of the river type hydro generating stations, shall be determined up to three decimal places based on the following formula:

$$ECR = AFC / DE,$$

Where,

DE = Annual Design Energy of the hydro generating station, in MWh

- (11) In case the Energy Charge Rate (ECR) for run of the river type hydro generating station, computed as per sub-regulation (10) exceeds ninety paise per kWh, and the actual saleable energy in a year exceeds { DE x (100 – AUX) / 10000 } MWh, the Energy Charge for the energy in excess of the above shall be billed at ninety paise per kWh only.

42. Computation of Capacity Charge and Energy Charge for Thermal Generating Stations:

A. Annual Fixed Charges

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

$$CC_1 = (AFC/12)(PAF_1 / NAPAF) \text{ subject to ceiling of } (AFC/12)$$

$$CC_2 = ((AFC/6)(PAF_2 / NAPAF) \text{ subject to ceiling of } (AFC/6)) - CC_1$$

$$CC_3 = ((AFC/4) (PAF_3 / NAPAF) \text{ subject to ceiling of } (AFC/4)) - (CC_1+CC_2)$$

$$CC_4 = ((AFC/3) (PAF_4 / NAPAF) \text{ subject to ceiling of } (AFC/3)) - (CC_1+CC_2+CC_3)$$

$$CC_5 = ((AFC \times 5/12) (PAF_5 / NAPAF) \text{ subject to ceiling of } (AFC \times 5/12)) - (CC_1+CC_2+CC_3+CC_4)$$

$$CC_6 = ((AFC/2) (PAF_6 / NAPAF) \text{ subject to ceiling of } (AFC/2)) - (CC_1+CC_2 +CC_3+CC_4 + CC_5)$$

$$CC_7 = ((AFC \times 7/12) (PAF_7 / NAPAF) \text{ subject to ceiling of } (AFC \times 7/12)) - (CC_1+CC_2+CC_3+CC_4 + CC_5 + CC_6)$$

$$CC_8 = ((AFC \times 2/3) (PAF_8 / NAPAF) \text{ subject to ceiling of } (AFC \times 2/3)) - (CC_1+CC_2+CC_3+CC_4 + CC_5 + CC_6 + CC_7)$$

$$CC_9 = ((AFC \times 3/4) (PAF_9 / NAPAF) \text{ subject to ceiling of } (AFC \times 3/4)) - (CC_1+CC_2+CC_3+CC_4 + CC_5 + CC_6 + CC_7+ CC_8)$$

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

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

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

Provided that in case of generating station or generating Unit thereof under shutdown due to renovation and modernisation, the generation business/company shall be allowed to recover part of AFC, which shall include O&M expenses and interest on loan only;

Where,

AFC = Annual fixed cost for the year, in Rupees;

NAF = Normative annual plant availability factor in percentage;

PAF_n = Percent Plant availability factor achieved upto the end of the nth month;

PAFY = Percent Plant availability factor achieved during the Year;

CC₁, CC₂, CC₃, CC₄, CC₅, CC₆, CC₇, CC₈, CC₉, CC₁₀, CC₁₁ and CC₁₂ are the Capacity Charges of 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th month, respectively.

(2) The PAFM upto the end of a particular month and PAFY shall be computed in accordance with the following formula:

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

Where,

AUX=Normative auxiliary consumption in percentage;

DC_i = Average Declared Capacity (in ex-bus MW), for the ith day of the

period, i.e., the month or the year as the case may be, as certified by the State Load Despatch Centre after the day is over;

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

N = Number of days during the period.

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

- (3) Incentive to a generating station or generating Unit thereof shall be payable at a flat rate of 50 paise/kWh for ex-bus energy generated in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) as specified in regulation 41(2).

B. Energy Charges

- (1) The Energy Charge shall cover the cost of landed fuel and shall be computed as follows:

Energy 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.

- (2) Rate of Energy Charges (REC) in Rs/kWh shall be the equal to the cost of normative quantity of fuel for delivering ex-bus one kWh of electricity and shall be computed as under:

$$REC = GSHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

Where,

AUX = Normative Auxiliary Consumption,

GSHR = Gross Station Heat Rate in kcal per kWh

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable during the

month. (In case of blending of fuel from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio)

CVPF =Weighted average Gross Calorific Value of Primary Fuel as received, in kcal per kg, per litre per standard cubic metre, as applicable for gas and liquid fuel based stations.

- (3) Adjustment of Rate of Energy Charge (REC) on account of variation in price or heat value of fuels:

Any variation in Price and/or Gross Calorific Value of liquid fuel vis-a-vis approved values shall be adjusted on month to month basis on the basis of average Gross Calorific Value of liquid fuel in stock, received and burnt and weighted average landed cost incurred by the generation business/company for procurement of liquid fuel for a power station. In its bills, the generation business/company shall indicate Rate of Energy Charges at base price of primary fuel specified by the Commission and the Fuel Surcharge to it separately. The generation business/company should submit the computation to the Commission on six-monthly basis for post-facto approval of adjustment of REC.

43. Demonstration of Declared Capacity. – (1) The generation business/company may be required to demonstrate the Declared Capacity of its generating stations as and when asked to do so by the State Load Despatch Centre. In the event the generation business/company fails to demonstrate the Declared Capacity, the Capacity Charges due to the generation business/company shall be reduced.

- (2) The quantum of reduction for the first mis-declaration for duration or block in a day shall be the charges corresponding to two days Capacity Charges. For the second mis-declaration, the penalty shall be equivalent to Capacity Charges for four days and for subsequent mis-declarations, the penalty shall be multiplied in the geometrical progression.
- (3) The operating logbooks of the generating station shall be made available for review by the SLDC, as the case may be. These books shall keep record of machine operation and maintenance, reservoir level and spillway gate operation.

44. Sale of Infirm Power from Hydro Generating station. - The tariff for sale of infirm power from the hydro generating station to the distribution business/licensee shall be equivalent to the Energy Charge Rate for the first year and revenue recovered from sale of infirm power shall be deducted from the capital cost.

45. Billing and payment of Charges. –Billing and payment of Charges shall be done on a monthly basis in the following manner:-

- (a) Billing and Payment of Annual Fixed Charges and Energy Charges for generating stations shall be done on a monthly basis subject to adjustments at the end of the year;
- (b) The distribution business/licensee and persons having power purchase agreement for firm power for more than one year shall pay the fixed/capacity charges in proportion to their percentage share, allocation or contract in the installed capacity of a generating station;
- (c) For payment of bills through a letter of Credit on presentation, the generation business/company and distribution business/licensee may mutually agree to a maximum rebate of 2 per cent of the bill amount. If the payments are made within one week of presentation of the bill, the generating company and distribution licensee may mutually agree to a maximum rebate of 1.25 per cent of the bill amount;
- (d) 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 generation business/company.

CHAPTER – VII TRANSMISSION

46. Applicability. – (1) The regulations contained in this Chapter shall apply for determination of tariff for access and use of the transmission system of the transmission business/licensee.

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

47. Capital Investment Plan. – (1) The transmission business/licensee shall submit detailed capital investment plan, financing plan and physical targets for undertaking investments for strengthening and augmentation of the intra-State transmission system for meeting the requirement of power evacuation, load growth, reduction in transmission losses, improvement in quality of supply, reliability, metering, etc., for the ensuing year by 30th September of the current year, to the Commission for its approval, in accordance with the 'Guidelines for In-principle Clearance of Capital Investment' enclosed at **Annexure-IV**.

- (2) The capital investment plan of the transmission business/licensee shall be consistent with the transmission system plan for the intra-State transmission system.
- (3) The transmission business/licensee shall be required to ensure optimum investments to enhance efficiency and productivity.
- (4) The capital investment plan shall be accompanied by such information, particulars and documents as may be required showing the need and justification for the proposed investments based on load flow studies. The investment plan shall also include capitalisation schedule and financing plan.
- (5) The Commission shall consider and approve the capital investment plan of the transmission business/licensee, with modifications based on prudence check, as appropriate. The costs corresponding to the approved investment plan of the transmission business/licensee for a given year shall be considered for its revenue requirement.

48. Prudence Check of Capital Cost. –The following principles shall be adopted for prudence check of capital cost of the new projects:

- a) In case of the transmission projects, prudence check of capital cost

may be carried out taking into consideration the benchmark norms specified by the CERC from time to time:

Provided that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the capital expenditure, financing plan, interest during construction, etc., for its reasonableness, use of efficient technology, cost over-run and time over-run, competitive bidding for procurement and such other matters as may be considered appropriate by the Commission for determination of tariff:

Provided further that in cases where benchmark norms have been specified, the transmission business/company shall submit the reasons for exceeding the capital cost from benchmark norms to the satisfaction of the Commission for allowing cost above benchmark norms.

49. Capital cost. – (1) 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.

(2) 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 capitalized.

50. Norms for operation. – (1) Target availability for full recovery of annual transmission charges for AC system shall be 98 per cent:

Provided that the recovery of annual transmission charges below the level of target availability shall be on pro-rata basis. At zero availability, no transmission charges shall be payable

Provided further that the availability shall be calculated in accordance with the procedure provided in the **Annexure-II** to these Regulations and shall be certified by the Kerala State Load Despatch Centre.

- (2) The transmission licensee shall be entitled to incentive on achieving annual availability beyond the target availability, in accordance with the following formula:

$$\text{Incentive} = \text{Aggregate Revenue Requirement} \times \frac{[\text{Annual availability achieved} - \text{Target Availability}]}{\text{Target Availability}}$$

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

Provided further that the computation of incentive/disincentive shall be undertaken during Truing up of ARR of each year.

51. Components of Aggregate Revenue Requirement and Tariff. – (1) The transmission charges for access to and use of the transmission system of the transmission business/licensee shall comprise of the following:

- a) Transmission System Access Charges; and
 - b) Transmission Charges.
- (2) Any person who is eligible to apply for access to the transmission system of the transmission business/licensee shall be entitled to obtain such access in accordance with the KSERC (Connectivity and Intra-State Open Access) Regulations, 2013 and shall be liable to pay the charges for obtaining such access as specified in such Regulations.
- (3) The annual Transmission Charges of the transmission business/licensee shall be determined by the Commission on the basis of an application for determination of tariff made by the Transmission Licensee in accordance with **Chapter IV** of these Regulations.
- (4) The annual Transmission Charges shall provide for the recovery of the aggregate revenue requirement of the transmission business/licensee for the financial year, after deducting the amount of non-tariff income, income from other Business, and income from open access charges, as approved by the Commission
- (5) The aggregate revenue requirement shall comprise of the following:
- (a) Operation and maintenance expenses;
 - (b) Interest and finance-charges on long-term loans;

- (c) Depreciation;
- (d) Interest on working capital and deposits from Users of the transmission system;
- (e) Contribution to contingency reserves; and
- (f) Return on Equity;

Minus:

- (g) Non-tariff income;
- (h) Revenue from short term/medium term open access; and
- (i) Income from other Business, to extent specified in these Regulations.

52. Operation and Maintenance expenses. –The transmission business/licensee shall be allowed to recover operation and maintenance Expenses as per the norms specified below for each year of the Control Period:

Table 8: O&M Norms for Transmission Business/Licensee

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
O&M Expenses Per Bay (Rs Lakh)	7.54	7.98	8.45
O&M Expenses Per ckt. km (Rs Lakh)	0.74	0.78	0.83

Note: Above O&M expense norms include expenses towards payment of pension, and if payment of pension is made through a separate bond, the employee expenses shall be reduced correspondingly

Explanation:

For the purpose of deriving normative O&M expenses, '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.

53. Contribution to contingency reserves and Investment Utilisation. –

(1) Where the transmission business/licensee has made an appropriation to the contingency reserve, a sum not more than 0.25% of the original cost of fixed assets shall be allowed annually towards such appropriation in the calculation of aggregate revenue requirement:

Provided that where the amount of such contingency reserve exceeds five (5) per cent of the original cost of fixed assets, no such appropriation shall be allowed, which would have the effect of increasing the reserve beyond the said maximum:

Provided further that the amount so appropriated shall be invested in securities authorised under the Indian Trust Act, 1882 within a period of six months of the close of the financial year.

(2) The contingency reserve shall not be drawn upon during the term of the licence except to meet such charges as may be approved by the Commission as being:

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

Provided that such drawal from contingency reserve shall be computed after making due adjustments for any other compensation that may have been received by the Transmission Business/Licensee as part of an insurance cover.

54. Non-Tariff Income. – (1) The amount of non-tariff income of the transmission business/licensee as approved by the Commission shall be deducted from the aggregate revenue requirement in determining the annual transmission charges of the transmission business/licensee:

Provided that the transmission business/licensee shall submit full details of its forecast of non-tariff income to the Commission along with its application for determination of tariff.

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

- (a) Interest on staff loans and advances;
- (b) Income from statutory investments;
- (c) Income from rent of land or buildings;
- (d) Income from sale of scrap;
- (e) Income from staff welfare activities;
- (f) Rental from staff quarters;
- (g) Excess found on physical verification;
- (h) Interest on investments, fixed and call deposits and bank balances;
- (i) Interest on advances to suppliers/contractors;
- (j) Income from hire charges from contractors and others;
- (k) Income due to right of way granted for laying fibre optic cables/co-axial cables on transmission system;
- (l) Income from advertisements, etc.;
- (m) Miscellaneous receipts;
- (n) Interest on delayed or deferred payment on bills:

Provided that the interest earned from investments made out of return on equity of the transmission business/licensee shall not be included in non-tariff income.

55. Income from Other Business. –Where the transmission business/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 business/licensee:

Provided that the transmission business/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 business/licensee on account of such other business.

56. Sharing of Annual Transmission Charges. – (1) The aggregate revenue requirement of the transmission business of KSEB Limited, as approved by the Commission, shall be shared by all long-term Users and medium-term Users of the transmission system on monthly basis in the ratio of their respective contracted transmission capacities to the total contracted transmission capacity, in accordance with the following formula:

$$ATC_n = (\text{Transmission ARR} \times CC_n / SCC) / 12$$

Where,

ATC_n = Annual Transmission Charges payable by the nth long-term or medium-term User of the transmission system;

Transmission ARR = aggregate revenue requirement of the transmission business of KSEB Limited, determined in accordance with regulation 52 of these Regulations;

CC_n = Capacity Contracted in MW by the nth long-term or medium-term User of the transmission system;

SCC = Sum of Capacities Contracted in MW by all long-term Users and medium-term Users of the transmission system:

Provided that the ATC_n shall be payable on monthly basis by each long-term or medium-term User of the transmission system and shall be

collected by the Transmission Business of KSEB Limited in its capacity as the STU:

- (2) The short-term Users of the transmission system shall pay Transmission Charges on Rs/MW/day basis, in accordance with the following formula:

$$TC \text{ (Rs/MW/day)} = (\text{Transmission ARR/SCC})/365,$$

Where,

TC (Rs/MW/day) = Transmission Charges payable by the short-term User of the transmission system;

Transmission ARR = aggregate revenue requirement of the transmission business of KSEB Limited, determined in accordance with regulation 52 of these Regulations;

SCC = Sum of Capacities Contracted in MW by all long-term Users of the transmission system:

- (3) For short-term collective transactions through power exchanges, Transmission Charges shall be denominated in Rs/kWh terms, in accordance with the following formula:

$$TC \text{ (Rs/kWh)} = \text{Transmission ARR/Total Units Wheeled},$$

Where,

TC (Rs/kWh) = Transmission Charges payable in case of short-term collective transactions through power exchanges;

Transmission ARR = aggregate revenue requirement of the transmission business of KSEB Limited, determined in accordance with regulation 52 of these Regulations;

Total Units Wheeled = Total energy units wheeled through the transmission system, which shall be equal to the total energy input into the intra-State transmission system.

57. Transmission losses. - The energy losses in the transmission system, as determined by the State Load Despatch Centre and approved by the

Commission, shall be borne by the Users of the transmission system in proportion to their usage of the transmission system.

58.Reactive Energy Charges. – (1) A generating station shall inject the reactive energy into the grid as per the directions of State Load Despatch Centre:

Provided that such injection/absorption may be undertaken on the basis of machine capability and in accordance with the directions issued by SLDC.

(2) The Users of the transmission system shall be subjected to the following Incentive/Disincentive for maintaining the reactive energy balance in the transmission system:

Table 9: Incentive/Disincentive for maintaining reactive energy balance in the transmission system

Party responsible for reactive energy compensation	Threshold performance	Voltage at Inter-change point (V_p)	Rate compensation for
TSU (Distribution Licensee / OA Users directly connected to State transmission network)	Maximum reactive energy drawal at each interchange point to be limited corresponding to power factor of 0.9	If $V_p > 103\%$ of V_{nom} If $V_p < 97\%$ of V_{nom} If $97\% < V_p < 103\%$	Incentive at the rate of Paise 10/RkVAh for additional drawal. Penalty at the rate of Paise 10/RVKAh for additional drawal. Nil

(3) Provided that the above incentives/disincentives shall be made applicable, only after adequate metering, energy accounting and billing infrastructure covering all interchange points on the transmission system is put in place by the STU and the concerned agencies.

59.Recovery of SLDC Charges. – (1) The Commission shall determine the annual SLDC Charges under two broad heads, viz., Operating Expenses and

Capital Expenditure, on the basis of separate accounts of SLDC, comprising of the following components:

a) Operating expense components

- (i) O&M expenses
- (ii) Interest on Working Capital
- (iii) RLDC Fees and Charges

b) Capital expense components

- (i) Depreciation
- (ii) Interest and finance charges on term loan
- (iii) Return on equity

Provided that where no separate accounts of SLDC are available, the Commission may, on suo-motu basis, apportion a part of the approved ARR of the transmission business of KSEB Limited as the ARR of SLDC:

Provided further that such apportionment of expenses between the transmission business and SLDC shall be done only for FY 2015-16.

- (2) The SLDC Charges shall be recovered from the ARR of distribution business of KSEB Limited and other small distribution licensees in the same proportion as the recovery of Transmission Charges.
- (3) The Operating Expenses component shall be recovered on a monthly basis and the Capital Expenses component shall be recovered on a half-yearly basis from the distribution licensees, in the manner directed by the Commission.

CHAPTER – VIII DISTRIBUTION BUSINESS

60. Applicability. – (1) The Regulations contained in this Chapter shall apply for determination of tariff for retail sale of electricity by the distribution business/licensee to its consumers.

(2) The Regulations contained in this Chapter shall also apply to the determination of tariff payable for wheeling of electricity by a User of the distribution system who has been allowed open access to the distribution system of the distribution business/licensee in accordance with the Kerala State Electricity Regulatory Commission (Connectivity and Intra-state Open Access) Regulations, 2013.

61. Capital Investment Plan. – (1) The distribution business/licensee shall submit detailed capital investment plan, financing plan and physical targets for meeting the requirement of load growth, reduction in distribution losses, improvement in quality of supply, reliability, metering, consumer services, etc., for the ensuing year by 30th September of the current year, to the Commission for its approval, in accordance with the 'Guidelines for In-principle Clearance of Capital Investment' enclosed at **Annexure-IV**.

(2) The distribution business/licensee shall be required to ensure optimum investments to enhance efficiency, productivity and meet performance standards specified by the Commission.

(3) The investment plan shall be accompanied by such information, particulars and documents as may be required showing the need and justification for the proposed investments. The investment plan shall also include capitalisation schedule and financing plan.

(4) The Commission shall consider and approve the capital investment plan of the distribution business/licensee, with modifications based on prudence check, as appropriate. The costs corresponding to the approved investment plan of the distribution business/licensee for a given year shall be considered for its revenue requirement.

62. Capital cost. – (1) 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.

(2) 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 capitalized.

63. Sales Forecast. – (1) The distribution business/licensee shall submit along with the tariff petition, a forecast of expected demand and sale of electricity for different categories of consumers and to each consumption slab within each tariff category in its area of supply.

(2) Sale of electricity, if any, to electricity traders or other distribution licensees shall be separately indicated.

(3) The sales forecast shall be consistent with the power procurement plan in accordance with regulation 68 of these Regulations and shall be based on past data and reasonable assumptions regarding the future.

(4) The Commission shall examine the forecasts for reasonableness based on growth in number of consumers and consumption and demand of electricity in previous years and anticipated growth in the next year and any other factor, which the Commission may consider relevant, and approve sale of electricity to consumers with such modifications as deemed fit.

64. Distribution Losses. – (1) The distribution business/licensee shall carry out proper loss estimation studies as required by the Commission, to set a realistic base line of loss estimates at different voltage levels and in relation to different consumer categories:

Provided that the distribution business/licensee shall submit separate details of transmission loss and distribution loss, while computing its total energy requirement.

(2) The distribution business/licensee shall submit information on total and voltage-wise distribution losses in the previous year and current year and

the basis on which such losses have been worked out, and also propose percentage loss reduction targets for each year of the Control Period, along with absolute loss levels for ease of reference, along with the Tariff Petition for the first year of the Control Period:

Provided that the distribution business/licensee shall substantiate proposed loss levels with necessary studies along with the Tariff Petition.

- (3) The Commission shall approve the distribution loss target for the ensuing year as well as subsequent years of the Control Period based on the opening loss levels, distribution business/licensee's filings, submissions and objections raised by stakeholders, and its judgement.

Provided that any variation between the actual level of distribution losses and the approved loss level shall be dealt with, as part of the Truing Up of the respective year, in accordance with the mechanisms provided in these Regulations.

65. Collection Efficiency. – (1) The distribution business/licensee shall give information of total and category-wise collection efficiency in the previous year and current year and the basis on which such collection efficiency has been worked out:

- (2) The distribution business/licensee shall also propose a target for collection efficiency for the ensuing year as well as for the subsequent years of Control Period giving details of the measures proposed to be taken for achieving the targets proposed, along with the Tariff Petition for the first year of the Control Period.

- (3) The Commission shall approve a target for improvement in collection efficiency as well as subsequent years of the Control Period based on the opening level of collection efficiency, distribution business/licensee's filings, submissions and objections raised by stakeholders, and its judgement:

Provided that any variation between the actual level of collection efficiency and the approved collection efficiency shall be dealt with, as part of the Truing Up of the respective year, in accordance with the mechanisms provided in these Regulations.

66. Components of Aggregate Revenue Requirement. – (1) The tariff and 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 IV** of these Regulations.

(2) The tariff of the distribution business/licensee shall provide for the recovery of the aggregate revenue requirement of the distribution business/licensee for the financial year after deducting the amount of non-tariff income, income from other business, and income from wheeling charges and surcharges, as approved by the Commission.

(3) The aggregate revenue requirement shall comprise of the following:

- (a) Cost of own power generation/power purchase;
- (b) Transmission charges;
- (c) NLDC/RLDC/SLDC charges;
- (d) Operation and Maintenance Expenses;
- (e) Interest and finance charges on long-term loans;
- (f) Depreciation;
- (g) Interest on Working Capital and on consumer security deposits and deposits from Users of the distribution system;
- (h) Contribution to contingency reserves;
- (i) Provision for Bad debts, if any; and
- (j) Return on Equity;

Minus:

- (k) Non-tariff income;
- (l) Income from wheeling charges recovered from open access consumers;
- (m) Income from other business, to the extent specified in these Regulations;
- (n) Receipts on account of cross subsidy surcharge on wheeling charges from open access consumers; and
- (o) Receipts on account of additional surcharge on wheeling charges from open access consumers:

- (4) 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.
- (5) Any revenue subsidy/grant received from the State Government other than the subsidy under Section 65 of the Act shall be treated in the manner as indicated by the State Government:

Provided further that if no such manner is indicated, the subsidy/grant shall be used to reduce the overall gap between the ARR and revenue of the distribution business/licensee.

67. Power Procurement Plan. – (1) The distribution business/licensee shall prepare an annual plan for procurement of power to meet the demand in its area of supply and submit such plan to the Commission for approval along with the application for determination of tariff for the ensuing year:

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

- (2) The power procurement plan of the distribution business/licensee shall comprise of the following:
- (a) A quantitative forecast of the unrestricted demand for electricity within its area of supply, from each tariff category over the year;
 - (b) Approved level of transmission and distribution losses:
Provided that for purchase of electricity from sources outside the State, the transmission loss level agreed to in the PPA or worked out from energy accounts of RLDC/SLDC shall be considered;
 - (c) An estimate of the quantities of electricity supply from the approved sources of generation and power purchase;
 - (d) An estimate of availability of power to meet the Base Load and Peak Load requirement:
Provided that the estimate should be monthly estimation of demand and supply both in Mega-Watt (MW) as well as expressed in Million Units (MU);

- (e) Standards to be maintained with regard to quality and reliability of supply, in accordance with the KSERC (Licensees' Standards of Performance) Regulations, 2006, as amended from time to time;
- (f) Measures proposed to be implemented as regards energy conservation and energy efficiency;
- (g) Minimum share of renewable energy purchase as specified by the Commission in separate Regulations;
- (h) 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 (g) above:

Provided that the forecast/estimate contained in the power procurement plan shall be separately stated for peak and off-peak periods, 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 of the year:

Provided further that the procurement plan shall be a cost-effective plan based on available information regarding costs of various sources of supply.

- (i) Proposed short-term power procurement;
 - (j) Based on Merit Order Despatch principles.
- (3) The distribution business/licensee shall also submit cost estimates for power procurement along with the annual power procurement plan, which shall be based on the following principles:
- a) The cost of power purchased from generating companies and cost of transmission shall be worked out based on tariff determined or adopted by the appropriate Commission, as the case may be;
 - b) The cost of power purchased from nuclear power stations of NPCIL shall be worked out on the basis of tariff notified by Department of Atomic Energy.

- c) The cost of short-term power purchase from traders, power exchange and other Licensees shall be based on estimates based on past trends.
- d) Cost of power generated by the distribution business/licensee and sold by it to consumers shall be worked out based on generation tariff determined by the Commission under **Chapter VI** of these Regulations.

68. Approval of Power Purchase Agreement/Arrangement. – (1) Every agreement or arrangement for power procurement by the distribution business/licensee from the generating business/company or Licensee or from other source of supply entered into after the date of coming into 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 accordance with this Regulation in respect of any agreement or arrangement for power procurement by the distribution business/licensee from the generating business/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 in accordance with this Regulation 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.

- (2) The Commission shall review an application for approval of power purchase agreement/arrangement having regard to the approved power procurement plan of the distribution business/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 VI** 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.
- (3) Where the terms and conditions specified under **Chapter VI** of these Regulations are proposed to be adopted, the approval of the power purchase agreement/arrangement between the generating business/company and the distribution business/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.

69. Additional Short-term power procurement. – (1) The distribution business/licensee may undertake additional short-term power procurement during the year, over and above the power procurement plan approved by the Commission, in accordance with this Regulation.

- (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 business/licensee may enter into additional short-term arrangement or agreement for procurement of power:

Provided that if the total power purchase cost for any quarter including such short-term power procurement exceeds 105% of the power purchase cost approved by the Commission for the respective quarter, the distribution business/licensee shall have to obtain prior approval of the Commission.

- (3) The distribution business/licensee may enter into a short-term power procurement agreement or arrangement without the prior approval of the Commission under the following circumstances:
- (a) Where the distribution business/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;
 - (b) 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;
 - (c) Where the tariff for power procured under such arrangement or agreement is in accordance with guidelines for short-term procurement of power by distribution licensees through Tariff based bidding process issued by the Central Government:

Provided that the Commission shall indicate a tariff for procurement of short-term power which shall be considered as approved ceiling tariff for short term power procurement under bidding guidelines:
 - (d) When the Commission has specified the minimum and maximum ceiling price for power procurement under any contingency situation and power purchase price is within that band;
 - (e) Procurement of short-term power through power-exchange;
 - (f) Procurement by way of exchange of energy under 'banking' transactions;
 - (g) The Commission may stipulate the ceiling quantum and ceiling rate for purchase of power from short-term sources.
- (4) 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 Business/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 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 this Regulation, 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 Business/Licensee as a result, from being passed through to consumers.

70. Transmission Charges and SLDC charges. – (1) Transmission and wheeling charges to be paid by the distribution business/licensee for transmission or wheeling of power purchased by it shall be considered as per tariff determined by the appropriate Commission:

Provided that transmission and wheeling charges paid for energy sold outside the State shall not be considered as expenses.

(2) NLDC/RLDC/SLDC charges as determined by the appropriate Commission shall be considered as expenses:

Provided that SLDC charges paid for energy sold outside the State shall not be considered as expenses for determining tariff.

(3) The distribution business/licensee shall be allowed to recover transmission charges payable for access to and use of the intra-State transmission system, and SLDC Charges in accordance with the tariff approved by the Commission for the transmission business/licensee under **Chapter VII** of these Regulations.

71. Operation and Maintenance Expenses. – (1) The distribution business of KSEB Limited shall be allowed to recover operation and maintenance expenses as per the norms specified below for each year of the Control Period:

Table 10: O&M Norms for Distribution Business of KSEB Limited

O&M Expenses	FY 2015-16	FY 2016-17	FY 2017-18
Employee Expenses			

O&M Expenses	FY 2015-16	FY 2016-17	FY 2017-18
Rs Lakh/'000 consumers	5.77	6.10	6.46
Rs. Lakh/ MVA of Distribution transformation capacity	8.89	9.41	9.96
Rs/unit of sales	0.21	0.22	0.24
A&G Expenses			
Rs Lakh/'000 consumers	0.27	0.29	0.31
Rs. Lakh/ MVA of Distribution transformation capacity	0.42	0.45	0.47
Rs/unit of sales	0.01	0.01	0.01
R&M Expenses			
% of opening GFA	3%	3%	3%

Note: Above O&M expense norms include expenses towards payment of pension, and if payment of pension is made through a separate bond, the employee expenses shall be reduced correspondingly

- (2) The Cochin Special Economic Zone (CSEZ), Technopark, Kinesco Power & Utilities Pvt. Ltd. (KPUPL) and Rubber Park of India (P) Ltd (RPIL) shall be allowed to recover the O&M expenses relating to their distribution business as per the norms specified below for the year 2015-16:

Table 11: O&M Norms for CSEZ, Technopark, KPUPL and RPIL

Particulars	CSEZ	Technopark	KPUPL	RPIL
O&M Expenses (Rs. Lakh)	167.39	136.34	129.66	79.55

Provided that the O&M expenses for the years 2016-17 and 2017-18 shall be allowed in the manner specified below:

$$O\&M_n = O\&M_{n-1} \times (1+K);$$

Where;

$O\&M_n$ = O&M Expense norm for n^{th} year;

$O\&M_{n-1}$ = O&M Expense norm for $n-1^{th}$ year;

K = Escalation Rate of 5.85%.

- (3) The Kanan Devan Hills Plantation Company Ltd. (KDHPCL), Cochin Port Trust (CPT) and Thrissur Corporation shall be allowed to recover the Employee Expenses and A&G Expenses relating to their distribution business as per the norms specified below for the year 2015-16:

Table 12: Norms for Employee Expenses and A&G Expenses for KDHPCL, CPT and Thrissur Corporation

Particulars	KDHPCL*	CPT#	Thrissur Corporation*
Employee Expenses	567.18	21.20	2805.40
A&G Expenses	70.95	6.96	176.35

* - in Rs. per consumer

- in Rs. thousand per consumer

Provided that the employee expenses and A&G expenses for the years 2016-17 and 2017-18 shall be allowed in the manner specified below:

$O\&M_n = O\&M_{n-1} \times (1+K)$;

Where;

$O\&M_n$ = Sum of employee expense and A&G Expense norm for n^{th} year;

$O\&M_{n-1}$ = Sum of employee expense and A&G Expense norm for $n-1^{th}$ year;

K = Escalation Rate of 5.85%.

- (4) The Kanan Devan Hills Plantation Company Ltd. (KDHPCL), Cochin Port Trust (CPT) and Thrissur Corporation shall be allowed to recover the R&M expenses relating to their distribution business as per the norms specified below for the Control Period:

Table 13: Norms for R&M Expenses for KDHPCL, CPT and Thrissur Corporation

Particulars	KDHPCL	CPT	Thrissur Corporation
R&M expenses (% of Opening GFA of distribution business)	7.80%	2.42%	3.21%

72. Contribution to Contingency Reserves and Investment Utilization. –

(1) Where the distribution business/licensee has made an appropriation to the contingency reserve, a sum not more than 0.25% of the original cost of fixed assets shall be allowed annually towards such appropriation in the calculation of aggregate revenue requirement:

Provided that where the amount of such contingency reserve exceeds five (5) per cent of the original cost of fixed assets, no such appropriation shall be allowed, which would have the effect of increasing the reserve beyond the said maximum:

Provided further that the amount so appropriated shall be invested in securities authorised under the Indian Trust Act, 1882 within a period of six months of the close of the financial year.

(2) The Contingency Reserve shall not be drawn upon during the term of the licence except to meet such charges as may be approved by the Commission as being:

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

Provided that such drawal from contingency reserve shall be computed after making due adjustments for any other compensation that may

have been received by the distribution business/licensee as part of an insurance cover.

73. Provision for Bad debts. – (1) The Commission may allow a provision for bad and doubtful debts in the revenue requirement of the distribution business/licensee, based on past data.

(2) The distribution business/licensee shall be allowed to provide for opening balances of receivables as per policies developed by the management of the distribution business/licensee:

Provided that the dues actually written off shall be reduced from the provision made against outstanding receivables and shall not be charged to the revenue account of the year.

74. Non-Tariff Income. – (1) The amount of non-tariff income of the distribution business/licensee as approved by the Commission shall be deducted from the aggregate revenue requirement in determining the tariff of the distribution business/licensee:

Provided that the distribution business/licensee shall submit full details of its forecast of non-tariff Income to the Commission along with its application for determination of tariff.

(2) The indicative list of various heads to be considered for non-tariff Income shall be as under:

- (a) Interest on staff loans and advances;
- (b) Income from statutory investments;
- (c) Income from trading;
- (d) Income from rent of land or buildings;
- (e) Income from sale of scrap;
- (f) Income from staff welfare activities;
- (g) Rental from staff quarters;
- (h) Excess found on physical verification;
- (i) Interest on investments, fixed and call deposits and bank balances;

- (j) Interest on advances to suppliers/contractors;
- (k) Income from hire charges from contractors and others;
- (l) Income due to right of way granted for laying fibre optic cables/co-axial cables on distribution system;
- (m) Income from advertisements, etc.;
- (n) Miscellaneous receipts;
- (o) Commission for collection of electricity duty;
- (p) Interest on delayed or deferred payment on bills;
- (q) Rebate from Central Generating Stations;
- (r) Revenue from late payment surcharge;
- (s) Recovery of theft and pilferage of energy;
- (t) Meter/metering equipment/service line rentals:

Provided that the interest earned from investments made out of return on equity or return on net fixed assets of the distribution business/licensee shall not be included in non-tariff Income.

75. Income from Other Business. –Where the distribution business/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 of the distribution business/licensee:

Provided that the distribution business/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, duly audited and certified by the statutory auditors, 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 exceeds the revenues from such other business, no amount shall be allowed to be added to the aggregate revenue requirement of the distribution business/licensee on account of such other business:

Provided further 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.

76. Determination of Wheeling Charges. – (1) While determining wheeling charges and tariff for retail supply of electricity, the Commission shall be guided by the provisions of Section 61 of the Act:

Provided that the Wheeling Charges of the distribution business/licensee may be determined by the Commission on the basis of segregated accounts for distribution wires business:

Provided further that where the distribution business/licensee is not able to submit audited and certified separate accounts for distribution wires business and retail supply business, the Commission may stipulate an allocation matrix for segregation of expenses between distribution wires business and retail supply business.

(2) The Commission shall determine the wheeling charge of the distribution business/licensee in its Order under sub-section (3) of Section 64 of the Act:

Provided that the charges payable by a User of the distribution system User may comprise any combination of fixed/demand charges, and variable charges, as may be stipulated by the Commission in such Order.

77. Fuel Surcharge Formula. – (1) The distribution business/licensee shall be allowed to adjust the difference between the actual fuel and power purchase cost and the fuel and power purchase cost approved in the ARR and Tariff Order in accordance with the provisions of these regulations.

(2) The Formula for adjustment of fuel and power purchase cost under clause (1) shall be as specified in **Annexure-VII** to these Regulations.

(3) The difference in fuel cost for own generation and rate of power purchase shall be computed with respect to the quantity of generation and power purchase approved in the respective ARR & Tariff Order for the year, based on merit order.

- (4) The Fuel Cost Recovery Rate (FCRR) shall be recovered in the form of paise/unit (kWh) in addition to the energy charges as per the existing tariff for the energy billed to each consumer, on a monthly or bimonthly basis as the case may be.
- (5) The FCRR for a particular month shall be recovered in the second subsequent month or as directed by the Commission.
- (6) The FCRR shall be uniformly applicable to all consumers in the State except domestic consumers with connected load less than or equal to 500W and having monthly consumption lower than 20 units.
- (7) The monthly FCRR shall not exceed 20 paise/unit or such other ceiling as may be stipulated by the Commission from time to time:

Provided that any excess in the FCRR over the above ceiling shall be carried forward by the distribution business/licensee and shall be recovered over such future period as may be directed by the Commission.

- (8) The Commission may decide appropriate period of recovery or adjustment of the total amount of fuel cost adjustment (F) and suitably adjust the FCRR considering its impact on the retail tariff of consumers
- (9) Every distribution business/licensee shall, within 15 days after the end of each quarter, submit before the Commission, the necessary details of computation of FCRR and FCRR recovered in that quarter for post-facto approval of the Commission.
- (10) The distribution business/licensee shall provide month-wise details of the change in fuel and power purchase cost with respect to the approved cost for all its generating stations using liquid fuel or coal and other sources from which energy is purchased, for each quarter separately. The month-wise details shall be submitted in the Form-I as stipulated in **Annexure-VII** to these regulations, on a quarterly basis.
- (11) Distribution licensees who purchase electricity from KSEB Limited in bulk for retail sale, shall within 7 days of the close of each month, provide month-wise retail sale of energy to KSEB Limited with a copy to the Commission to facilitate the estimation of FCRR. KSEB Limited shall consolidate the retail sales and indicate with calculations, the provisional FCRR to be recovered along with the details submitted in Form-I.

- (12) The Commission may seek additional information if any required from the distribution licensees and the distribution licensees shall provide the details within the time limit if any stipulated by the Commission.
- (13) The distribution business/licensee shall file separately the additional cost due to change in hydro thermal mix on account of excess/reduction in rainfall and subsequent excess/shortfall in power purchase, within 30 days of the close of every financial year.
- (14) The Commission may approve the excess/shortfall in cost on account of change in hydro thermal mix after receiving all information from the distribution business/licensee.
- (15) The distribution licensees who purchase electricity in bulk from KSEB Limited shall promptly remit to KSEB Limited on a monthly basis, the amount of FCRR recovered from their consumers for the quantity of electricity purchased from KSEB Limited.

78. Cross subsidy Surcharge. – (1) The consumers who are permitted open access through the transmission network of the transmission business/licensee and the distribution network of the distribution business/licensee shall pay to the distribution business/licensee in whose area the consumer is located, a cross subsidy surcharge as per the formula specified in the **Annexure-VIII** to these Regulations.

- (2) The cross subsidy surcharge shall be levied in the manner indicated in accordance with the KSERC (Connectivity and Intra state Open Access) Regulations, 2013, as applicable and as amended from time to time.

79. Receipts on account of Cross Subsidy Surcharge. – The amount received by the distribution business/licensee by way of cross-subsidy surcharge, as approved by the Commission, shall be deducted from the aggregate revenue requirement in calculating the tariff for distribution business/licensee.

80. Receipts on account of Additional surcharge. – The amount received by the distribution business/licensee by way of additional surcharge on charges of wheeling, as approved by the Commission in accordance with the

KSERC (Connectivity and Intra state Open Access) Regulations, 2013, as applicable and as amended from time to time, shall be deducted from the aggregate revenue requirement in calculating the tariff for distribution business/licensee.

81.Manner of provision of subsidy by State Government. - With effect from the April 1, 2015, if the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the Commission, the State Government shall, notwithstanding any direction, which may be given under Section 108 of the Act, pay in advance the amount to compensate the distribution licensee/person affected by the grant of subsidy, as a condition for the licensee or any other person concerned to implement the subsidy provided for by the State Government, in the manner specified in these Regulations:

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 these Regulations and the tariff fixed by the Commission shall be applicable from the date of issue of Orders by the Commission in this regard.

82.Norms for Operation. – (1) The norms for Wire Availability shall be stipulated by the Commission in due course, based on the availability of data.

(2) 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.

(3) The target Supply Availability shall be 100%:

Provided that for every 1 percent under-achievement in Supply Availability, Rate of Return on Equity or Rate of Return on Net Fixed Assets shall be reduced by 0.1 percent:

Provided further that the Distribution Business/Licensee shall be required to submit periodic reports along with the calculation of Supply Availability.

(4) Base Load Supply Availability shall be computed in accordance with the following formula:

Base Load Supply Availability = (Actual Contracted Base Load Supply in MW) / (Base Load in MW):

Provided that the Base Load shall be calculated based on unrestricted demand of the Distribution Licensee.

- (5) Peak Load Supply Availability shall be computed in accordance with the following formula:

Peak Load Supply Availability = (Actual Contracted Peak Load Supply in MW) / (Peak Load in MW):

Provided that the Peak Load shall be calculated based on unrestricted demand of the Distribution Licensee.

CHAPTER – IX MISCELLANEOUS

83. Effect of Non-Compliance. - Failure to comply with any requirement of these Regulations shall not invalidate any Proceeding merely by reason of such failure unless the Commission is of the view that such failure has resulted in miscarriage of justice.

84. Issue of Order and Practice Directions. – (1) Subject to the provision of the Act and these Regulations, the Commission may, from time to time, issue Orders and Practice directions with regard to the implementation of these Regulations and procedure to be followed on various matters, which the Commission has been empowered by these Regulations to direct, and matters incidental or ancillary thereto.

- (2) Notwithstanding anything contained in these Regulations, the Commission shall have the authority, either *suo-motu* or on a Petition filed by any interested or affected party, to determine the tariff of any applicant.

85. Power to remove difficulties. - If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by general

or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

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

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

88. Inquiry and Investigation. - All inquiries, investigations and adjudications under these Regulations shall be done by the Commission through the proceedings in accordance with the provisions of the Kerala State Electricity Regulatory Commission (Conduct of Business) Regulations, 2003, as amended from time to time.

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

90. Repeal and savings. – (1) Save as otherwise provided in these Regulations, the “Kerala State Electricity Regulatory Commission (Tariff) Regulations, 2003”, “Kerala State Electricity Regulatory Commission (Terms and Conditions of Tariff for Retail Sale of Electricity) Regulations, 2006”, “Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Distribution and Retail Sale of Electricity under MYT Framework) Regulations, 2006”, and the “Kerala State Electricity Regulatory Commission (Fuel Surcharge formula) Regulations, 2009” are hereby repealed.

(2) Notwithstanding such repeal, any proceedings before the Commission pertaining to the period till March 31, 2015, including review Petitions, shall be governed by the applicable Regulations for that period.

Annexure-I
DEPRECIATION SCHEDULE

Description of Assets		Depreciation (Straight line) (%)
A.	Land owned under full title	--
B.	Assets Purchased New:	
a.	Plant and machinery in generating stations including plant foundations	
	i) Hydro-electric	5.28
	ii) Steam electric	5.28
	NHRS & Waste Heat Recovery Boilers/Plants	
	iii) Diesel-electric and gas plant	5.28
b.	Cooling towers and circulating water systems	5.28
c.	Hydraulic works forming part of Hydro-electric systems including:-	
	i) Dams, Spillways, weirs, canals, reinforced concrete Flumes and siphons	5.28
	ii) Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and other hydraulic works	5.28
d.	Building & civil engineering works of permanent character	
	i) Offices & showrooms	3.34
	ii) Containing thermo-electric generating plant	3.34
	iii) Containing hydro-electric generating plant	3.34
	iv) Temporary erection such as wooden structures	100
	v) Roads other than kutchra roads	3.34
	vi) Others	3.34
e.	Transformers, transformer (Kiosk) sub-station equipment & other fixed apparatus (including	

Description of Assets		Depreciation (Straight line) (%)
	plant foundations)	
	i) Transformers (including foundations) having a rating of 100 kilo volt amperes and over	5.28
	ii) Others	5.28
f.	Switchgear including cable connections	5.28
g.	Lightning arrestors	
	i) Station type	5.28
	ii) Pole type	5.28
	iii) Synchronous condenser	5.28
h.	Batteries	5.28
	i) Underground Cable including joint boxes and disconnected boxes	5.28
	ii) Cable duct system	5.28
i.	Overhead lines including supports:	
	i) Lines on fabricated steel operating at nominal voltages higher than 66 kV	5.28
	ii) Lines on steel supports operating at nominal voltages higher than 13.2 kilovolts but not exceeding 66 kilovolts	5.28
	iii) Lines on steel or reinforced concrete supports	5.28
	iv) Lines on treated wood supports	5.28
j.	Meters	5.28
k.	Self propelled vehicles	9.50
l.	Air conditioning plants:	
	i) Static	5.28
	ii) Portable	9.50
m.	i) Office furniture and fittings	6.33
	ii) Office equipments	6.33
	iii) Internal wiring including fittings and apparatus	6.33
	iv) Street light fittings	5.28
n.	Apparatus let on hire	
	i) Other than motors	9.50

Description of Assets			Depreciation (Straight line) (%)
	ii)	Motors	6.33
o.		Communication equipment:	
	i)	Radio and high frequency carrier system	6.33
	ii)	Telephone lines and telephones	6.33
p.		I.T. equipments	15.00
q.		Assets purchased second hand and assets not otherwise provided for in the Schedule	5.28

Useful Life

- (i) Gas/ Liquid fuel based thermal generating station: 25 years
- (ii) Coal/Lignite based thermal generating station: 25 years
- (iii) Hydro generating station: 35 years
- (iv) AC and DC sub-station: 25 years
- (v) Gas Insulated sub-station (GIS): 25 years
- (vi) Transmission line and transmission system
(including HVAC and HVDC): 35 years
- (vii) Distribution lines and distribution system: 35 years

Annexure-II

Procedure for calculation of Availability of a Thermal generating station for any period

Availability in relation to a thermal generating station for any period means the average of the daily average declared capacities as certified by 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:

$$\text{Availability} = 10000 \times \sum_{i=1}^N \text{DC}_i / \{ N \times \text{IC} \times (100 - \text{AUX}_n) \} \%$$

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

DC_i = Average Declared Capacity in MW for the ith time block in such period

IC = Installed Capacity of the generating station in MW

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

(ii) Procedure for calculation of Transmission System Availability

1. Transmission System Availability shall be calculated separately for each Transmission System. The transmission elements shall be grouped into following categories for the purpose of calculation of availability of Transmission Systems :
 - i) AC transmission lines: Each circuit of AC transmission line shall be considered as one element.

- ii) Inter-Connecting Transformers (ICTs): Each ICT bank (three single phase transformer together) shall form one element.
 - iii) Static VAR Compensator (SVC): SVC along with SVC transformer shall form one element. However, 50% credit to inductive and 50% to capacitive rating shall be given.
 - iv) Switched Bus Reactor: Each switched Bus Reactor shall be considered as one element.
2. The Availability of AC portion of Transmission system shall be calculated as under:

% System Availability for AC system

$$= \frac{o \times AV_o + p \times AV_p + q \times AV_q + r \times AV_r}{o + p + q + r} \times 100$$

Where

- o is Total number of AC lines.
- AV_o is Availability of o number of AC lines.
- p is Total number of switched bus reactors .
- AV_p is Availability of p number of switched bus reactors.
- q is Total number of ICTs.
- AV_q is Availability of q number of ICTs.
- r is Total number of SVCs.
- AV_r is Availability of r number of SVCs.

3. The weightage factor for each category of transmission elements shall be as under:
- i) For each circuit of AC line – Surge Impedance Loading for Uncompensated line (SIL) multiplied by Circuit Km.
 - ii) SIL rating for various voltage level and conductor configuration is given in **Appendix-II** to this Annexure. However, for the voltage levels and/or conductor configurations not listed in **Appendix-II**, appropriate SIL based on technical considerations may be used for

availability calculation under intimation to Transmission System Users.

- iii) For each ICT bank – The rated MVA capacity.
 - iv) For SVC – The rated MVAR capacity (inductive & capacitive).
 - v) For switched Bus reactor – The rated MVAR capacity.
4. The availability for each category of transmission elements shall be calculated based on the weightage factor, total hours under consideration and non-available hours for each element of that category. The formulae for calculation of Availability of each category of the Transmission elements are as per **Appendix-I** to this **Annexure - II**.
5. The transmission elements under outage due to following reasons not attributable to the transmission licensee shall be deemed to be available:
- i) Shut down of transmission elements availed by other agency/agencies for maintenance or construction of their transmission system.
 - ii) Manual tripping of line due to over voltage and manual tripping of switched bus reactor as per the directions of SLDC.
6. Outage time of transmission elements for the following contingencies shall be excluded from the total time of the element under period of consideration.
- i) Outage of elements due to acts of God and force majeure events beyond the control of the transmission licensee. However, onus of satisfying the Commission or any such other forum/agency as specified by the Commission that element outage was due to aforesaid events and not due to design failure shall rest on the transmission licensee. A reasonable restoration time for the element shall be allowed by Commission or any such other forum/agency as specified by the Commission and any additional time taken by the transmission licensee for restoration of the element beyond the reasonable time shall be treated as outage time attributable to the transmission licensee. Commission or any

such other forum/agency as specified by the Commission may consult the transmission licensee or any expert for estimation of restoration time. Circuits restored through ERS (Emergency Restoration System) shall be considered as available.

- ii) Outage caused by grid incident/disturbance not attributable to the transmission licensee, e.g. faults in substation or bays owned by other agency causing outage of the transmission licensee's elements, tripping of lines, ICTs, etc. due to grid disturbance. However, if the element is not restored on receipt of direction from SLDC while normalising the system following grid incident/disturbance within reasonable time, the element will be considered not available for whole period of outage and outage time shall be attributable to the transmission licensee.
7. If the outage of any element causes loss of generation at a in-state generation stations then the outage period for that element shall be deemed to be twice the actual outage period for the day(s) on which such loss of generation has taken place.

ANNEXURE – III
(For Hydro based Generating Stations)

It is to certify that the (Name of the Station) has fulfilled all the key provisions as prescribed below in accordance with Regulation 5 of KSERC (Terms and Conditions of Determination of Tariff), Regulations, 2014.

1. All documents as prescribed in Regulation 3(8) of the CEA (Technical Standards for Construction of Electric Plants and Electric Lines) Regulations, 2010 have been retained at site and are available at site.
2. All requirements as per Regulation 30(1), 30(2) and 30(5) of the CEA (Technical Standards for Construction of Electric Plants and Electric Lines) Regulations, 2010 have been complied.
3. The unit operating capability shall be in conformity to Regulation 32 (1), 32(3), 32(4), 32(6) and 32(8) of the CEA (Technical Standards for Construction of Electric Plants and Electric Lines) Regulations, 2010.
4. All requirements as per Regulation 33(6), 33(7), 33(8) of the CEA (Technical Standards for Construction of Electric Plants and Electric Lines) Regulations, 2010 have been complied for the hydraulic Turbine.

Name:
(CMD/CEO/MD)

(For Gas based Generating Stations)

It is to certify that the **(Name of the Station)** has fulfilled all the key provisions as prescribed below in accordance with Regulation 5 of KSERC (Terms and Conditions for Determination of Tariff), Regulations, 2014.

1. All documents as prescribed in Regulation 3(8) of the CEA (Technical Standards for Construction of Electric Plants and Electric Lines) Regulations, 2010 have been retained at site and are available at site.
2. All requirements as per Regulation 5 of the CEA (Technical Standards for Construction of Electric Plants and Electric Lines) Regulations, 2010 have been complied.
3. The unit operating capability shall be in conformity to Regulation 14 (2), 14(3), 14(4), 14(5) and 14(7) of the CEA (Technical Standards for Construction of Electric Plants and Electric Lines) Regulations, 2010.
4. All requirements as per Regulation 17 and Regulations 9(2), 9(4), 9(9), 9(15), 9(16), 9(18) of the CEA (Technical Standards for Construction of Electric Plants and Electric Lines) Regulations, 2010 have been complied for the Steam Turbine.

Name:

(CMD/CEO/MD)

Annexure-IV

Guidelines for proposed In-principle clearance of Investment Schemes

Capital Expenditure (Capex) forms an important and integral part of the costs of Utilities and contributes significantly to the final prices that consumers pay. There is also a close link between capital expenditure and quality of supply. It is essential to ensure that capital expenditure incurred is prudent and efficient. The Regulatory Commission has to allow the appropriate level of Capex to form part of the revenue requirement of the Utility. For the effective implementation of the proposed tariff framework, the need to link tariff adjustments to increases in the productivity of capital employed is also to be kept in view.

While Capital Investment is required to be made by the Utilities for various purposes like the creation of new infrastructure to meet load growth, to meet statutory requirements, to strengthen the existing system and increase its efficiency, refurbish or replace old/ obsolete assets, etc., any such capital investment increases the capital base and consequently the reasonable return, thus increasing the tariff payable by the consumers. It is therefore, necessary to ensure that such capital investment schemes being proposed are necessary and justified, and do not impose an unnecessary burden on consumers by way of tariff.

Regulation 21 of the KSERC (Conditions of Licence for Existing Distribution Licensee) Regulations, 2006 requires the distribution licensee to take prior approval of the Commission for schemes involving 'major investment', i.e., above Rs. 10 crore, and not covered under the investment plan approved by the Commission.

These Guidelines shall be followed by all Utilities while submitting their Investment Plan. For evaluation of these and future proposals in respect of all Utilities, the methodology and evaluation criteria are outlined below:

Methodology

A. Submission of Capital Investment Plan

The Utility shall submit the Capital Investment Plan outlining the major schemes proposed, in the manner directed by the Commission. Such Plan shall be uniform and consistent with other relevant proposals, and supporting information as desired by the Commission shall be presented in the submission.

B. Capital Investment Schemes

- (a) For the purpose of these guidelines, a Capital Investment Scheme means:
 - i) Any non-recurring capital expenditure programme of the Transmission Licensee/ business and Distribution Licensee/ business for the acquisition, construction or improvement of permanent facility in the respective sector (i.e., Transmission, Distribution)
 - ii) Capital investment scheme involving replacement, renovation and modernization or life extension of existing fixed assets of the generating Company/business.
- (b) The Schemes shall be planned considering the 3-5 year investment horizon
- (c) The scope of investments included in each Scheme shall be any of the following:
 - (i) Works of a similar or related nature
For example, New Receiving Stations proposed at different locations within the licence area must be clubbed together and presented as a Scheme for New Receiving Stations, Schemes for modernization/augmentation of the Transmission cables must be presented together, Information Technology Schemes, SCADA and Communication Equipment at the region/State level, Schemes for Major Replacement of Old Equipment, etc.
 - (ii) Different types of Works within a geographical area, say in a District

For example, all capital investments covered under a District Integrated Scheme can be presented together as a Scheme.

- (iii) An independent identifiable project as would be submitted to a Financial Institution like REC, PFC, etc. or for funding under APDRP.

C. Submission of Detailed Project Reports

For those Capital Investment Schemes exceeding the amount stipulated by the Commission from time to time (say, Rs. 5 crore or Rs. 10 crore), the Utilities shall submit the Detailed Project Report for the Commission's In-Principle Approval with a Broad Cost-Benefit Analysis. The capital investment plans shall constitute a least cost plan.

The Detailed Project Reports shall necessarily include the scope and objective of the proposed Scheme and elaborate how the Scheme meets the evaluation criteria mentioned herein.

The Detailed Project Reports shall be submitted in the manner prescribed by the Commission from time to time.

D. Evaluation of the Detailed Project Reports

Stages of Approval Process

- **In-Principle Clearance**
- **Final approval at the time of Capitalization/during the Tariff Determination Process/ARR & ERC Review**

In-Principle Clearance: During this stage, the Scheme would be given clearance considering primarily its scope and objective, while keeping in view the criteria stipulated below.

Tariff Determination Process and/or ARR & ERC Review process: During this stage, the impact of the capital expenditure schemes will be included in the ARR and hence, the tariffs, based on the approved capital expenditure and any cost over-run, if approved by the Commission.

- (i) **Statutory Requirements:**

Whether the proposed Capital Investment is necessary to discharge the duties and obligations of the Utility as per the Electricity Act, 2003 and rules and Regulations made thereunder? Whether it is in line with such provisions, Rules and Regulations?

(ii) Need for investment:

Whether the proposed capital investment is necessary to set-up the infrastructure

- a) To strengthen the system to meet the normal load growth
- b) To supply to new consumers
- c) For improving the quality of supply to consumers

Whether equipments are operating close to their rated capacities and the proposed capital investment is necessary

- a) To increase the reliability of the system
- b) For life extension of the equipment thereby reducing the load on it.
- c) To facilitate the creation of back-up facilities

(iii) Technical Justification:

- a) Whether the Scheme confirms to the technical design criteria?
- b) Whether the replacement of old equipment is necessary for equipments, which have outlived their normal life-span?
- c) Whether the useful life of the considered equipment is reasonable?
- d) What is the average rate of technology obsolescence for the considered equipment?
- e) Whether the proposed investment would improve the reliability of supply?
- f) Whether the investment is necessary for a reduction in T&D/Transmission or Distribution losses?

(iv) Timing of the Investment:

- a) Whether the investment can be deferred (for its optimization)?
- b) Whether the investment planned is commensurate with the demand growth?

(v) Prudence of the Investment:

- a) Whether other alternatives schemes have been considered?
- b) Whether the proposed investment would result in duplication of existing infrastructure?
- c) Whether the proposed investment is a necessity for the conduct of business, or is it a luxury, the burden of which is being passed on to consumers

(vi) Cost Benefit Analysis:

- a) Whether the cost estimates are reasonable?
- b) Whether it is in line with the cost rates approved by the Commission?
- c) Whether the least cost option has been considered?

Annexure-V
Plant Load Factor

Plant load factor shall be computed in accordance with the following formula:

$$\text{Plant Load Factor (\%)} = \frac{\sum_{i=1}^N \text{AG}_i}{10000 \times \{N \times \text{IC} \times (100 - \text{AUX}_n)\}} \times 100\%$$

where,

N = number of time blocks in the given period;

AG_i = Actual ex-bus generation in MW for the ith time block in such period;

IC = Installed capacity of the generating station in MW;

AUX_n = Normative auxiliary consumption in MW, expressed as a percentage of gross generation;

Annexure-VI**Ceiling norms for capitalised initial spares****Ceiling norms for the capitalised initial spares as a percentage of the Plant and Machinery cost upto cut-off date**

- | | | |
|-----|--|---------|
| (a) | Coal based/lignite fired thermal generating stations | - 4.0%; |
| (b) | Gas turbine/combined cycle thermal generating stations | - 4.0%; |
| (c) | hydro generating stations | - 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 switchgear sub-station (GIS) | - 5.0% |
| | (vi) Communication system | - 5.0% |

Annexure-VII
Fuel Cost Recovery Rate

The Formula for adjustment of fuel and power purchase cost shall be as under:

$$\text{Fuel Cost Recovery Rate (FCRR)(paise/kWh)} = [F (\text{Rs.})/E] \times 100$$

F = The amount of Fuel and Power Purchase cost adjustment (Rs.)

$$= F_o + F_p + B$$

E = Energy billed for retail sale in previous quarter based on the approved distribution loss

F_o = Change in Fuel cost for the energy from own stations

$$= \sum_1^n Q_{\text{own}} \times (\text{Rate}_{\text{Act}} - \text{Rate}_{\text{App}})$$

F_p = Change in cost for the purchased energy due to change in fuel cost

$$= \sum_1^k Q_{\text{pur}} \times (\text{Price}_{\text{Act}} - \text{Price}_{\text{App}})$$

(F_o and F_p shall be calculated for each station month wise and added up)

B = Balancing term to take care of difference, if any, in the energy sales and

$$Q_{\text{own}} = \text{Quantity of Fuel used for Own Stations}$$

$$= \frac{\text{Approved Station heat Rate } \left(\frac{\text{kcal}}{\text{kWh}}\right)}{\text{Calorific Value of fuel } \left(\frac{\text{kcal}}{\text{kg}}\right)} \times \text{Actual or approved energy whichever is less in MU} \times 10^3$$

Q_{pur} = Actual Quantity of energy purchased or approved quantity, whichever is less

Rate_{App} = Actual price of Fuel (Rs./MT)

Rate_{Act} = Approved price of Fuel (Rs./MT)

Price_{Act} = Actual price of purchased energy (Rs./kWh)

Price_{App} = Approved price of purchased energy (Rs./kWh)

Annexure-VII

Fuel Cost Recovery Rate (Form-I)

(refer Regulation 78)

Name of Distribution Business/Licensee _____

Format 1 : Details of month wise energy billed for retail sale for the quarter

Month	Retail Sales (kWh)		T&D loss (%)		Energy input (kWh)	
	Actual	Approved	Actual	Approved	Actual	Approved

Format 2: Month wise details of generation from own sources & IPPs (Stationwise): Month: _____ Quarter: _____

Source	Energy generation (kWh)		Aux. consumption (kWh)		Net energy input (kWh)		Station heat rate (kcal/kWh)		Calorific value of fuel (kcal/kg)	Quantity of fuel (MT)		Price of fuel (Rs./MT)	
	Actual	Approved	Actual	Approved	Actual	Approved	Actual	Approved		Actual	Approved	Actual	Approved

Note : 1) If more than one fuel is used, information may be provided separately for each fuel
 2) In the case of IPPs, norms as per PPA may be indicated

Format 3: Month wise details of purchase of energy Month: _____ Quarter: _____

Source	Energy purchase (kWh)		Price Rs./kWh		Total Cost (Rs.)	
	Actual	Approved	Actual	Approved	Actual	Approved

Format 4 : Source wise energy input for the quarter

Source	Month		Month		Month	
	Actual	Approved	Actual	Approved	Actual	Approved

Annexure-VIII
Cross Subsidy Surcharge

Cross Subsidy Surcharge shall be calculated as per following formula:

$$S = T - [C/(1-(L/100))+D]$$

Where,

S is the Cross Subsidy Surcharge;

T is the Tariff payable by the relevant category of consumers;

C is the weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable energy sources;

D is the Wheeling Charge;

L is the System losses for the applicable voltage level, expressed as a percentage:

Provided that if S is computed to be negative as per above Formula, S shall be considered as zero.

Annexure-IX
Tariff Filing Formats

APPENDIX-I**Formulae for calculation of Availability of each category of transmission elements**

$$AV_o(\text{Availability of } o \text{ no. of AC lines}) = \frac{\sum_{i=1}^o \frac{W_i(T_i - T_{NA})}{T_i}}{\sum_{i=1}^o W_i}$$

$$AV_q(\text{Availability of } q \text{ no. of ICTs}) = \frac{\sum_{k=1}^q \frac{W_k(T_k - T_{NAk})}{T_k}}{\sum_{k=1}^q W_k}$$

$$AV_r(\text{Availability of } r \text{ no. of SVCs}) = \frac{\left[\sum_{l=1}^r \frac{0.5 W_{lI} (T_{lI} - T_{NAI})}{T_{lI}} + \sum_{l=1}^r \frac{0.5 W_{lC} (T_{lC} - T_{NAC})}{T_{lC}} \right]}{\left[\sum_{l=1}^r 0.5 W_{lI} + \sum_{l=1}^r 0.5 W_{lC} \right]}$$

$$\left[\begin{array}{c} r \\ \sum_{l=1}^r 0.5 W_{lI} + \sum_{l=1}^r 0.5 W_{lC} \end{array} \right]$$

$$AV_s(\text{Availability of } s \text{ no. of Switched Bus reactors}) = \frac{\sum_{m=1}^s \frac{W_m(T_m - T_{NAM})}{T_m}}{\sum_{m=1}^s W_m}$$

Where W_i = Weightage factor for i^{th} transmission line

W_k = Weightage factor for k^{th} ICT

W_{lI} & W_{lC} = Weightage factors for inductive & capacitive operation of l^{th} SVC

W_m = Weightage factor for m^{th} bus reactor

$T_i, T_k, T_l,$
 $T_{Cl}, T_m \& T_n$

The total hours of i^{th} AC line, k^{th} ICT, l^{th} SVC (Inductive Operation), l^{th} SVC (Capacitive Operation), m^{th} Switched Bus Reactor & n^{th} HVDC back-to-back block during the period under consideration (excluding time period for outages not attributable to transmission licensee for reasons given in Para 6 of the procedure)

$T_{NAi}, T_{NAk},$
 $T_{NAil}, T_{NACl},$
 T_{NAm}

The non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability as per Para 5 of the procedure) for i^{th} AC line, k^{th} ICT, l^{th} SVC (Inductive Operation), l^{th} SVC (Capacitive Operation), m^{th} Switched Bus Reactor.

APPENDIX – II**SURGE IMPEDANCE LOADING (SIL) OF AC LINES**

S. No.	Line voltage (kV)	Conductor Configuration	SIL (MW)
1	220	Twin Zebra	175
2	220	Single Zebra	132
3	220	Kundah	<u> </u>
4	220	Zebra	<u> </u>
5	220	Twin Moose	<u> </u>
6	132	Single Panther	50
7	110	Wolf	<u> </u>
8	66	Single Dog	10
9	66	Mink	<u> </u>
10	66	Tiger	<u> </u>

Thiruvananthapuram

(_____)

Dated: _____, 2014

Secretary,

Kerala State Electricity Regulatory Commission