

KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM

NOTICE

No. 1234 /Con Engg/ 2021/KSERC

Dated: 06th August, 2021

In exercise of the powers conferred by sub section (1) of Section 181 of the Electricity Act, 2003 (Central Act 36 of 2003), read with Section 61, and all other powers enabling it in this behalf; the Kerala State Electricity Regulatory Commission hereby makes the following 'draft' namely; the '**Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2021**', for the information of persons likely to be affected thereby. Any objection or suggestions thereon may be forwarded to the Secretary, Kerala State Electricity Regulatory Commission, KPFC Bhavanam, C.V Raman Pillai Road within one month from the date of this notice. Objections and suggestions received on or before the said date shall be considered by the Commission before finalization of the said draft regulation.

By Order of the Commission

Secretary

CHAPTER – 1

PRELIMINARY

1. Short title, commencement, extent and applicability. –

- (1) These Regulations shall be called the Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2021.
- (2) These Regulations shall come into force from 01.04.2022.
- (3) These Regulations shall extend to the whole of the State of Kerala.
- (4) These Regulations shall be applicable for the five (5) year Control Period starting from 1st April, 2022 (Financial Year 2022 – 2023).
- (5) These Regulations shall be applicable to:
 - (i) all the businesses relating to generation, transmission and distribution of the Kerala State Electricity Board Limited (KSEB Ltd.) and its successors;
 - (ii) all the generating companies, distribution licensees, transmission licensees, if any, other than that of KSEB Ltd.; and
 - (iii) the State Load Despatch Centre (SLDC).

2. Scope of the Regulation. -

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

- (i) Supply of electricity by a Generating Company, except from Renewable Sources of energy, to a Distribution Licensee;
- (ii) Intra-State transmission of electricity;
- (iii) Intra-State wheeling of electricity;
- (iv) Bulk and Retail supply of electricity;
- (v) Surcharge in addition to the charges for wheeling under the first proviso to sub-section (2) of Section 42 of the Act;
- (vi) Additional surcharge on the charges for wheeling under sub-section (4) of Section 42 of the Act;
- (vii) Fuel surcharge.

3. Definitions. -

In these Regulations, unless the context otherwise requires,-

- (1) “**Act**” means the Electricity Act, 2003 (Central Act 36 of 2003), as amended from time to time;
- (2) “**Aggregate Revenue Requirement (ARR)**” means the annual revenue requirement comprising of allowable expenses and return on paid up equity share capital/ return on net fixed assets, as the case may be, pertaining to the regulated/ licensed business of the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre, for recovery through tariffs, in accordance with these Regulations;
- (3) “**Allocation Statement**” means an audited statement for each financial year, in respect of the 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 the separate businesses of the regulated entity including the licensed business, together with a description of the basis of the apportionment or allocation:

Provided that such allocation statement in respect of a Generating Station shall be maintained in a manner so as to enable its tariff determination; stage-wise, Unit-wise and/ or for the whole Generating Station.

- (4) **“Annual Design Energy”** means the quantum of energy that could be generated annually in a 90% dependable year with 95% availability of installed capacity of the hydro-generating station as set out in the Detailed Project Report.
- (5) **“Audited accounts”** means the Financial Statements as audited by the Statutory auditors and/ or the Comptroller and Auditor General, as the case may be;
- (6) **“Auxiliary energy consumption of a generating station or a generating unit”** means the quantum of energy consumed by the auxiliary equipment of the generating station or generating unit including; switchyard of the generating station and the 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 that generating station;

Explanation: The auxiliary energy consumption of a generating station or a generating unit shall not include the energy consumed by the station’s housing colony or such other facilities at the generating station and the energy consumed for construction of new projects, if any, at the generating station, which shall be metered separately.

- (7) **“Auxiliary energy consumption of a transmission sub-station”** means the quantum of energy consumed by auxiliary equipment of the transmission sub-station and the transformer losses within the transmission sub-station and shall be expressed as a percentage of the sum of gross energy injected at the incoming terminals of the transmission substation;

Explanation: The auxiliary energy consumption of a transmission sub-station shall not include the energy consumed for supply of electricity to the housing colony and such other facilities at the transmission substation, which shall be metered separately.

- (8) **“Availability”**, -
 - (i) of a thermal generating station for any given period means the average of the daily average declared capacities as certified by the State Load Despatch Centre 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 *Chapter V* to these Regulations;
 - (ii) of a transmission system for any 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 as a percentage of the total hours in the given period as certified by SLDC and shall be calculated as provided in *Annexure-2* to these Regulations;

- (iii) The Actual Annual Availability during the year shall be computed by the Generating Company for each Generating Station/ Unit(s) or the Transmission Licensee, as applicable and certified by the SLDC.
- (9) **“Average Power Purchase Cost”** or “APPC” during a year means the weighted average cost of power purchased by the distribution licensee for the previous year as approved by the Commission;
- (10) **“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;
- (11) **“Base load”** means the average of monthly minimum system demand in MW during the financial year of a distribution business/ licensee in its area of supply, defined in terms of system demand in MW, or as decided by the Commission from time to time;
- (12) **“Base rate”** means the External Benchmark-Linked Lending Rate (EBLR) declared by the State Bank of India as applicable on first day of April of respective financial year;
- (13) **“Beneficiary”** means, -
- (i) in relation to a generating station, the person purchasing electricity generated at such generating station under these Regulations;
 - (ii) in relation to a Transmission Licensee, the Transmission System Users;
 - (iii) in relation to the Distribution Wire Business, the Generating Companies connected to the distribution system and consumers;
 - (iv) in relation to the Retail Supply Business, the consumers;
 - (v) in relation to the SLDC, the Distribution Licensees and Open Access consumers who utilize the Intra-State Transmission system for transmission of electricity and/ or utilize the distribution system of a Licensee in the State for wheeling of electricity and/ or avail the services of the SLDC relating to scheduling and real-time grid operations, State energy accounting, operation of pool account etc.
- (14) **“Calendar Month”** means one of the months as named in the Gregorian calendar or the period from a day of one month to the last day of the same month.
- (15) **“Capacity charge”** means the charges computed as per Chapter V of these Regulations;
- (16) **“Capital Investment”** means the investment of funds for acquiring long term assets such as real estate, plants and machinery, lines and substations etc. by a company/licensee in order to further its business goals and objectives;
- (17) **“Ceiling Rate”** means the highest rate allowable in a transaction;

- (18) **“Central Commission”** means the Central Electricity Regulatory Commission (CERC) referred to in sub section (1) of Section 76 of the Act;
- (19) **“Change in law”** means the occurrence of any of the following events: -
- (i) the enactment, bringing into effect, adoption, promulgation, amendment, modification, repeal of any Central or State law; or
 - (ii) change in the interpretation or application of any Central or State law by any authority having competent jurisdiction, which is the final authority under the law for such interpretation; or
 - (iii) change by any competent statutory authority, in any consent, approval or licence; or
 - (iv) coming into force of 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/ business or the transmission system regulated under these Regulations; or
 - (v) Any change in taxes or duties, or introduction of any taxes or duties levied by the Central or any State Government.
- (20) **“Collection Efficiency”** means the payment received against the demand raised in the bills of the distribution business/ licensee for a particular period, expressed as a percentage excluding the payment of arrears;
- (21) **“Collective Transaction”** means a set of transactions discovered in the power exchange through anonymous simultaneous competitive bidding by buyers and sellers;
- (22) **“Commission”** or **‘KSERC’** means the Kerala State Electricity Regulatory Commission;
- (23) **“Competitive Bidding”** means a transparent process for procurement of power, equipment, services and works in which bids are invited by the procurer by open advertisement covering the scope and specifications of the power requirement, equipment, services and works required; and the terms and conditions of the proposed contract as well as the criteria by which bids shall be evaluated, and shall include domestic competitive bidding and international competitive bidding;
- (24) **“Conduct of Business Regulations”** means the Kerala State Electricity Regulatory Commission (Conduct of Business) Regulations, 2003, as amended from time to time;
- (25) **“Control Period”** means the period during which the principles and norms for determination of revenue requirement and tariff specified in these Regulations shall remain valid;
- (26) **“Controllable factors”** means the factors as specified in Regulation 12 of these Regulations;

(27) **“Cut-off date”** means the date after 24 months from the date of commercial operation (COD) of the project;

Provided that the cut-off date may be extended by the Commission, if it is proved on the basis of documentary evidence that the additional capitalization could not be made within the cut-off date, for reasons beyond the control of the project developer;

(28) **“Cross Subsidy”** means the difference between the applicable average tariff of that consumer category/sub category and the average cost of supply as approved by the Commission for that year;

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

(i) in the case of Generation and Transmission projects the commercial operation date, as provided in *Annexure 8* to these Regulations;

(ii) in the case of a Distribution Licensee, 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 the distribution licensee or their suppliers/ contractors.; and

(iii) the date of commercial operation shall not be a date prior to the scheduled date of commercial operation mentioned in the 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 the parties to such an agreement.

(30) **“Day”** means a day consisting of a period of twenty four hours starting at 00:00 hour;

(31) **“De-capitalization”** for the purpose of tariff under these Regulations, means the reduction in Gross Fixed Assets of the project as approved by the Commission corresponding to inter-unit transfer of assets or the assets taken out from service;

(32) **“Declared capacity”** means, the capability of a generating station to deliver ex-bus electricity in MW declared by the 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 provisions in these Regulations;

(33) **“Design energy”** means the quantum of energy, which can be generated in a ninety percent dependable year with ninety-five percent installed capacity of the hydro-electric generating station;

(34) **“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;

- (35) "**Distribution Licensee**" means a Licensee authorized by the Commission to operate and maintain a distribution system for supplying electricity to consumers in its area of supply;
- (36) "**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;
- (37) "**Energy Charge Rate**" means the per unit electricity charge for the energy fed to the grid from the power plant;
- (38) "**Escalation rates**" means a composite rate used for calculation of escalation based on the Consumer Price Index (CPI) and Wholesale Price Index (WPI) at 70:30 basis respectively for a financial year;
- (39) "**Equity**" means the paid-up capital contributed by the company/licensee for financing the assets;
- (40) "**Existing Generating unit/ station or Transmission system or Distribution system**" means a generating unit/ station or transmission system or distribution system, which has declared commercial operation on or before the thirty first day of March 2022;
- (41) "**Expected Revenue from tariff and Charges**" or '**ERC**' means the revenue estimated to accrue to the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre at the prevailing tariff;
- (42) "**Extra High Tension/ Voltage**" or '**EHT/ EHV**' means all the voltages above 33 kV;
- (43) "**Financial/ Accounting Statements**" means the Financial/ Accounting Statements of a licensee or a company and shall include the following statements together with notes and such other supporting statements, and the information as may be required by the Commission from time to time, for each financial year, namely:-
- (i) Audited Balance Sheet, prepared in accordance with the relevant provisions of the Companies Act, 2013 (Central Act 18 of 2013), as amended from time to time and as applicable for the respective financial year;
 - (ii) Audited Profit and Loss Account, prepared in accordance with the relevant provisions of the Companies Act, 2013(Central Act 18 of 2013), as amended from time to time and as applicable for the respective financial year;
 - (iii) Audited Cash Flow Statement, prepared in accordance with the Indian Accounting Standard (*Ind AS*) 7 - statement of cash flows, notified by the, Government of India;
 - (iv) report of the statutory auditors;

- (v) cost records of electricity utility as prescribed by the Central Government under the relevant provisions of the Companies Act, 2013, as amended from time to time, for the respective financial year;
- (vi) in case of licensees or generating entities other than those covered under the Companies Act 1956 or Companies Act 2013, the financial statements prepared as per the provisions of the law under which they are established:

Provided that in the case of an entity engaged in more than one business including licensed/distribution business, such entities shall file separate audited financial statements of the regulated business which shall form part of the financial statements:

Provided further that, till the SLDC remains part of the State Transmission Utility/ Licensee, separate books of accounts for the SLDC shall be maintained by the STU and shall be audited and certified by the statutory auditor, which shall form part of the financial statements.

- (44) **“Financial year”** means the period commencing on the first day of April of a Gregorian calendar year and ending on the thirty first day of March of the subsequent Gregorian calendar year;
- (45) **“Force Majeure”** or **“Force Majeure Event”** means the event or circumstance or combination of events or circumstances or both, which partly or fully prevents the generating business/ company or the transmission business/ licensee or the distribution business/ licensee or SLDC, from completing the project or station within the time specified in the investment approval given by the Commission or for performing its duties and obligations; due to the occurrence of any Non-political/ Indirect political/ Political events indicated below and only if such event or circumstance are not within the control of the company/ business/ licensee and could not have been avoided, had the company/ business/ licensee taken reasonable care or complied with prudent utility practices, -

(i) **Non Political Events** such as:

- a) act of God, epidemic, including but not limited to lightning, drought, 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;
- b) the discovery of geological conditions, archaeological remains;
- c) unavoidable accident, including but not limited to fire, explosion, radioactive contamination and toxic chemical contamination;
- d) strikes or boycotts (other than those attributable to any act or omission of the company/ business/ licensee) affecting the project more than 7 days in a financial year;
- e) any judgement or order of any court of competent jurisdiction or statutory authority made, which shall affect the execution of the project, for reasons other than attributable to the actions of the company/ business/ licensee;
- f) Any event or circumstances of a nature analogous to any of the above.

(ii) **Indirect Political Event** such as:

- a) any act of war, invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action, State wide strikes, industrial disturbances, civil commotion or politically motivated sabotage;
- b) Any event or circumstances of a nature analogous to any of the above.

(iii) **Political Event** such as:

- a) Change in law substantially affecting the technical and/or financial aspects of the project;
- b) Compulsory acquisition in national interest or expropriation of any project assets or rights;
- c) Unlawful or unauthorized or without jurisdiction revocation of, or refusal to renew or grant without valid cause, any clearance, licence, permit, authorization, NOC, consent, approval or exemption required for the project; provided such action is due to the act of the company/ business/ licensee;
- d) Any event or circumstances of a nature analogous to any of the above.

(46) **“Generation business”** means the business of production of electricity from a generating station or generating unit for the purpose of,-

- (i) giving supply to any beneficiary or enabling supply to be so given; or
- (ii) for the purpose of supply of electricity to any Distribution Licensee in accordance with the provisions of the Act and the rules and regulations made thereunder; or
- (iii) subject to the Regulations made under sub-section (2) of Section 42 of the Act, supply of electricity to any consumer;

(47) **“Generating Company”** means any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person, which owns or operates or maintains a generating Station;

(48) **“Generating station”** means any station for generating electricity, including any building and plant with step up transformer, switch gear, switch yard, cables or other appurtenant equipment if any, used for that purpose and the site thereof; where electricity is generated by hydro power, includes penstocks, head and tail works, main and regulating reservoirs, dams and other hydraulic works;

(49) **“Generating unit”** in relation to a hydro-electric generating station means the turbine-generator and its auxiliaries and in relation to a thermal generating station, means the generator, engine and its auxiliaries;

(50) **“Generation Tariff”** means the tariff for ex- bus supply of electricity from a Generating Unit or Station thereof;

(51) **“Gross Calorific Value”** or **“GCV”** in relation to a thermal generating station means the quantum of 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;

- (52) **“Gross Station Heat Rate”** or **‘GSHR’** means the heat energy input in kilocalories required to generate one kilowatt hour (kwh) of electrical energy at the generator terminals of a thermal generating station;
- (53) **“High Tension/ Voltage”** or **‘HT/ HV’** means all the voltage levels above and including 650 volts and upto and including 33 kV;
- (54) **“Infirm power”** means the electricity injected into the grid prior to the commercial operation date of a unit of the generating station, in accordance with the provisions of the KSERC ‘Connectivity and Intra State Open Access Regulations’, 2013;
- (55) **“Installed capacity”** or **‘IC’** of a generating station means the sum of the name plate capacities of all the units of the generating station or the capacity of the generating station reckoned at the generator terminals, as approved by the Commission from time to time;
- (56) **“Inter connection point”** means a point at extra-high voltage (EHV) substation of the transmission Licensee or HV sub-station of the Distribution Licensee, as the case may be, where the electricity produced by the Generating Station is injected into the State Grid or the point of interconnection between the transmission network and the distribution network and shall be guided by the Regulations notified by the Commission & Central Electricity Authority (CEA);
- (57) **“Inter state transmission system (ISTS)”** means the transmission system as defined in sub section (36) of Section 2 of the Act;
- (58) **“Intra-State transmission system (STS)”** 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, but excluding assets forming part of inter-State transmission system;
- (59) **“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;
- (60) **“Low Tension/ Voltage”** or **‘LT/ LV’** means all the voltages below 650 Volts;
- (61) **“Master Trust”** means the Master Trust, as defined in the Kerala Electricity Second Transfer (Re-vesting) Scheme, 2013 notified by the Government of Kerala, vide: G.O(P) No.46/2013/PD dated 31-10-2013;
- (62) **“Maximum Continuous Rating (MCR)”** in relation to a generating unit of the thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer at rated parameters; and “maximum continuous rating” in relation to a block of a combined cycle thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer with water or steam injection (if applicable) and corrected to 50 Hz grid frequency and specified site conditions;

- (63) **“New generating unit/ station”** means a generating unit/ station which declared its commercial operation on or after the first day of April, 2022;
- (64) **“Ninety (90)% dependable year” of a hydro electric station** means the year having the annual inflow of water, at least equal to that which has the probability of delivering the design energy equal to or in excess of 90%, during the expected period of operation of the Plant;
- (65) **“Non-tariff income of the regulated business”** means the income other than those obtained from tariff such as income from wheeling, receipts on account of cross-subsidy surcharge and additional surcharge on charges of wheeling, reactive energy charges, meter rent, rental from electric plants or lines, testing fee, late payment surcharge, prompt payment incentives, recovery from theft and pilferage of energy or such other charges or miscellaneous charges;
- (66) **“Normative Annual Plant Availability Factor” (NAPAF)**, in relation to a hydel Generating Station, means the Availability Factor specified in *Chapter V* of these Regulations for the hydel generating stations;
- (67) **“Normative loan”** means:
- (i) the amount of actual equity employed in excess of thirty percent of the approved capital cost, excluding grants and/ or contribution; or
 - (ii) in case where actual equity employed is less than thirty percent of the approved capital cost after adjusting for grants and/or contribution, the balance amount of approved capital cost, excluding such equity;
- (68) **“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 (excluding capital spares), consumables, insurance costs/ premium and administrative and general expenses as approved by the Commission, but excludes fuel expenses; and
 - (ii) in relation to a transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre means the expenditure incurred on operation and maintenance of the system by the transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre respectively and includes the expenditure on manpower, repairs, spares (excluding capital spares), consumables, insurance costs and administrative and general expenses as approved by the Commission;
 - (iii) in relation to SLDC means the expenditure incurred by SLDC on operation and maintenance, and includes the expenditure on manpower, repairs, spares, consumables, annual maintenance contracts (AMC) and other service contracts, petition filing fees, and other overheads as approved by the Commission;

- (69) **“Original Project Cost”** means the capital expenditure incurred by the generating business/ company or the transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre, as the case may be, within the original scope of the project upto the cut-off date as approved by the Commission;
- (70) **“Other business”** means any business undertaken by the generation business; the transmission business/ licensee under Section 41 of the Act or the distribution business / licensee under Section 51 of the Act for the optimum utilization of its assets;
- (71) **“Other income”** means the income other than those from tariff and non-tariff sources and as enumerated in these Regulations;
- (72) **“Peak load”** means the average of monthly maximum system load in MW of a distribution business/ licensee in its area of supply during the financial year, defined in terms of the System demand in MW, as decided by the Commission from time to time;
- (73) **“Petitioner”** means a Generating Company or Transmission Licensee or Distribution Licensee or SLDC as the case may be, who has filed a Petition for determination of Tariff or Fees and Charges or for True up or for Mid-term Review or any other petition in accordance with the Act and these Regulations, and includes a Generating Company or Transmission Licensee or Distribution Licensee or SLDC whose Tariff or Fees and Charges is the subject of a review by the Commission on a suo-motu basis or as part of a Truing-up exercise or Mid-term Review;
- (74) **“Plant Availability Factor (PAF)”** in relation to a generating station for any given period means the average of the daily declared capacities 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 consumption;
- (75) **“Plant Load Factor (PLF)”**, in relation to a thermal generating station for a given period, means the total energy sent out during such period, expressed as a percentage of energy generated corresponding to its installed capacity during that period and shall be computed in accordance with the formula specified below:
- PLF (%) = $[10000 \times \sum_{i=1}^N AGi] \div [N \times IC \times (100 - AUX)]$** ; where,
- AUX = Normative auxiliary consumption in MW, expressed as a percentage of the gross generation;
- AGi = Actual ex-bus generation in MW for the ith time block in such period;
- IC = Installed capacity (in MW) of the generating station;
- N = Number of time blocks in the given period.
- (76) **“Project”** means a generating station or the transmission system or the distribution system, as the case may be, before the date of commercial operation; and in the case of a hydro-electric generating station it includes all the components of generating facility such as penstocks, head and tail works, main and regulating

reservoirs, dams and other hydraulic works, intake structures, water conductor system, power generating station and generating units of the scheme, as apportioned to power generation;

- (77) **“Prudence check”** means the scrutiny by the Commission on the reasonableness of expenditure incurred or proposed to be incurred, in terms of 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, with a view to ensuring that the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre has exercised economy, efficiency and effectiveness and been vigilant in its decisions while incurring the expenditure;
- (78) **“Pumped storage hydro-electric generating station”** means a hydro station which generates power through energy stored in the form of water energy, pumped from a lower elevation reservoir to a higher elevation reservoir;
- (79) **“Rated voltage”** means the voltage at which the transmission system or distribution system is designed to operate or any lower voltage at which the line is charged, for the time being, in consultation with the users;
- (80) **“Regulated business”** means the electricity business, which is regulated by the Commission in accordance with the Act, Rules and the Regulations made there under;
- (81) **“Regulations”** means the ‘Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2021’;
- (82) **“Renewable Energy Sources”** mean the new and renewable electricity generating sources such as wind, solar, biomass, bio-fuel, urban or municipal waste, small, mini and micro hydro-electric sources and include such other sources as approved by the Ministry of New and Renewable Energy, Government of India;
- (83) **“Retail supply business”** means the business of sale of electricity by a distribution business/ licensee to its consumers in accordance with the terms and conditions of its licence;
- (84) **“Run-of-the-river generating station”** means a hydro-electric generating station, which does not have an upstream pondage;
- (85) **“Scheduled date of commercial operation”** means the date of commercial operation of a generating station or generating unit thereof or transmission system or element thereof, as declared by the generating company/ transmission licensee or as indicated in the approved power purchase agreement or transmission service agreement, as the case may be, whichever is earlier;
- (86) **“Scheduled Energy”** means the quantum of energy scheduled by the concerned Load Despatch Centre to be injected into the grid by a generating station for a given time period;

- (87) “**Scheduled Generation**” for any period or time block means the schedule of ex-bus generation in MW or MWh, given by the concerned Load Despatch Centre to the generating station;
- (88) “**Small hydro generating stations**” means the Hydro Power projects with a station capacity upto and including 25 MW;
- (89) “**State Grid Code**” means the “Kerala State Electricity Grid Code”, specified by the Commission under clause (h) of subsection (1) of Section 86 of the Act, as amended from time to time;
- (90) “**State Load Despatch Centre**” or “**SLDC**” means the centre established by the Government of Kerala for the purpose of exercising the powers and discharging the functions under Section 31 of the Act or any such centre carrying out such functions located within the State of Kerala;
- (91) “**State Power Committee (SPC)**” means the Power Committee set up under the State Grid Code/ Regulations specified by the Commission;
- (92) “**Statutory Auditor**” means an auditor appointed by a Generating Company or a Licensee, in accordance with the provisions of the Companies Act, 2013, as amended from time to time, or any other law for the time being in force;
- (93) “**Statutory charges**” means the taxes, cess, duties, royalties and other charges levied through: Acts of the Parliament or State Legislature or by Government of India/ State Instrumentality such as; Ministry or Department or Board or Quasi-judicial Authority constituted under the relevant Statutes in India;
- (94) “**Storage type power station**” means a hydro-electric power generating station associated with large storage capacity to enable variation in generation of electricity according to demand;
- (95) “**Subsidy**” means a benefit given to a consumer category as per the provisions of the Act;
- (96) “**Surcharge**” means an extra fee or additional charge added to the cost of energy or service rendered, beyond the normal charges;
- (97) “**Tariff**” means the schedule of charges for generation, transmission, wheeling or supply of electricity together with the terms and conditions for application thereof proposed by the licensee/ generating company and as approved by the Appropriate Commission;
- (98) “**Thermal Generating Station**” means a Generating Station or a unit thereof, that generates electricity using fossil fuels such as coal, lignite, gas, liquid fuel or combination of these as its primary source of energy;
- (99) “**Time block**” means a continuous block of 15 minutes starting from 00:00 hours, unless the context otherwise requires;
- (100) “**Transmission business**” means the business of establishing or operating the transmission system;

- (101) **“Transmission Licensee”** means a licensee authorized by the Commission to establish or operate the Transmission system, under Section 14 of the Act;
- (102) **“Transmission Loss”** means the energy losses in the transmission system of a transmission Licensee including auxiliary power consumption in the sub-station for the purpose of air-conditioning, lighting, battery charging, accessories of the substation equipments etc., and shall be accounted for separately;
- (103) **“Transmission Service Agreement” (TSA)** means an agreement, contract, or any such covenant, entered into between the transmission licensee and the user(s) of the transmission service/ lines within the state;
- (104) **“Transmission system”** means a transmission line or a group of lines with or without associated sub-stations, and includes equipments associated with transmission lines and sub-stations;
- (105) **“Uncontrollable factors”** means the factors as specified in Regulation 12 of these Regulations;
- (106) **“Unit/block”** in relation to a Generating Station means the electric generator, its prime mover and auxiliaries and; in relation to a combined cycle Thermal Generating Station includes combustion turbine – generators, associated waste heat recovery boilers, connected steam turbine – generator and auxiliaries;
- (107) **“Useful life”** in relation to a unit of a generating station, transmission system or distribution system from the date of the commercial operation shall mean the following, namely:-
- | | |
|--|-----------|
| (i) Coal/Lignite based thermal generating Station: | 25 years; |
| (ii) Gas/Liquid fuel based thermal Generating Station: | 25 years; |
| (iii) Hydro Generating Station including Pumped Storage
Hydro Generating Station: | 40 years; |
| (iv) AC and DC sub-Station: | 35 years; |
| (v) Gas Insulated sub-Station: | 35 years; |
| (vi) Transmission line (including HVAC and HVDC): | 35 years; |
| (vii) Distribution line: | 35 years; |
| (viii) Communication System: | 15 years. |
- (108) **“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;
- (109) **“Wheeling”** means the operation whereby the distribution system and associated facilities of a transmission Licensee or Distribution Licensee, as the case may be, are used by another person for the conveyance of electricity on payment of charges, determined under Section 62 of the Act;

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

- (i) **“Current Year”** means the year in which the petition for determination of tariff is required to be filed;
- (ii) **“Previous Year”** means the year immediately preceding the current year;
- (iii) **“Ensuing Year”** means the year next following the current year.

4. Interpretations.-

- (1) Words and expressions used and not defined in these Regulations, but defined in the Act and the Rules and Regulations made thereunder by the Central/ State Governments, Central Electricity Authority, Central Commission and this Commission, as applicable, shall have the meanings assigned to them in the said Act, Rules and Regulations. Expressions used herein but not specifically defined in these Regulations or in the Act, but defined under any law passed by the competent legislature and applicable to the electricity industry in the State shall have the same meaning assigned to them in such law. Subject to the above, expressions used herein, but not specifically defined in these Regulations or in the Act or any law passed by a competent legislature, shall have the same meaning as is generally assigned in the electricity industry.
- (2) In the interpretation of these Regulations, unless the context otherwise requires,-
 - (i) words in the singular or plural term, as the case may be, shall also be deemed to include the plural or the singular term, respectively;
 - (ii) the terms "include" or "including" shall be deemed to be followed by "without limitation" or "but not limited to", regardless of whether such terms are followed by such phrases or words;
 - (iii) references herein to these Regulations shall be construed as a reference to these Regulations, as amended or modified by the Commission from time to time in accordance with the applicable laws in force;
 - (iv) Reference to any Statutes, Regulations or Guidelines shall be construed as, including all statutory provisions consolidating, amending or replacing such Statutes, Regulations or Guidelines, as the case may be, referred to.
 - (v) If a question arises relating to the interpretation of any provision of these Regulations, the decision of the Commission shall be final.

5. Prudence check by the Commission.-

The Commission shall conduct prudence check with due diligence while issuing orders for determining the Aggregate Revenue Requirement and the revenue from tariff and charges of a generating business/ company, transmission business/ licensee, distribution business/ licensee or the State Load Despatch Centre and the truing up of the accounts for the relevant financial years.

6. Norms of operation to be the 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 and the beneficiaries thereof, as the case may be, from agreeing to improved/ better norms of operation and in case the improved norms are agreed to and approved by the Commission, such improved norms shall be applicable for the determination of tariff.

7. Adoption of tariff under Section 63 of the Act.-

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 complied with.

CHAPTER – II

GENERAL PRINCIPLES

8. Control Period. –

- (1) The Control Period is the period for which the principles and norms specified under these Regulations shall be applicable.
- (2) The Control Period shall be a block of five financial years starting from the first day of April, 2022 and ending on the thirty first day of March, 2027:

Provided that the Commission may, if considered necessary, through an Order extend the validity of these Regulations beyond the thirty first day of March, 2027, to such period or periods as deemed appropriate.

9. Multi Year Tariff (MYT) framework.-

- (1) The multi-year tariff framework under these Regulations shall be applicable for determination of tariff by the Commission, on matters covered under *clauses (i) to (vii) of Regulation 2 of these Regulations*, for a generating business/ company, transmission business/ licensee, distribution business/ licensee and the State Load Despatch Centre.
- (2) The multi-year tariff framework for the generating business/ company, transmission business/ licensee, distribution business/ licensee and the State Load Despatch Centre, for calculation of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges (ARR & ERC), shall be based on the following elements:-
 - (i) Forecast of Aggregate Revenue Requirement (ARR) for the Control Period along with the expected revenue from the existing and proposed tariff and charges, separately for each year of the Control Period;
 - (ii) Truing up of the expenses and revenue of the respective year based on the audited accounts of the business/ licensee vis-à-vis the Commission approved forecast and variation, caused by the controllable factors and uncontrollable factors, as specified in *Regulation 12* of these Regulations;
 - (iii) The mechanism for pass-through of the approved gains or losses on account of the uncontrollable factors as specified by the Commission in *Regulation 13* of these Regulations;
 - (iv) The mechanism for sharing of the approved gains arising out of controllable factors as specified by the Commission in *Regulation 14* of these Regulations;
 - (v) Approval of the Aggregate Revenue Requirement of the business/ licensee by the Commission for the Control Period along with the determination of tariff for each year of the Control Period;
 - (vi) Mid-term Performance Review (MPR) in year 2024-25, based on the trued up figures for 2022-23 and 2023-24 and the annual performance review upto September 2024. The Commission shall take into account, the uncontrollable

parameters and the variations in actual performance on account of the controllable parameters for the respective years of the Control Period; vis-à-vis the ARR approved for the Control Period and the revised forecast for the years 2024-25, 2025-26 and 2026-27, on account of the un anticipated variations, if any, on the controllable and uncontrollable parameters.

10. Filing under the Multi-Year Tariff (MYT) framework. –

(1) Every generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre shall file, on or before the Fifteenth day of December 2021, the following petitions for the Control Period:

(i) Petitions for approval of Aggregate Revenue Requirement and determination of tariff separately for each year of the Control Period, including capital investment plan for each year of the control period;

Provided that, in the case of Generation Business/ Company, Transmission Business/Licensee, Distribution Business/Licensee & SLDC of Kerala State Electricity Board Limited and Thrissur Corporation Electricity Department, separate petition shall be filed on or before 30th November 2021 for the approval of the capital investment plan for each year of the control period;

(ii) Petitions for truing up of the Aggregate Revenue Requirement for the financial years upto 2020-21:

Provided that, the truing up for each financial year shall be carried out under the relevant Regulations, applicable to the respective years;

Provided further that every generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre shall file, on or before the thirtieth day of November of every financial year during the Control Period, the petition for Truing up of the Aggregate Revenue Requirement for the financial years from 2021-22.

(2) Every generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre shall file, on or before the thirtieth day of November 2024, the Mid-term Performance Review (MPR); which shall comprise of the truing up for the financial years upto 2023-24 and mid year performance review for the year 2024-25 upto September 2024 and the revised forecast, for the years 2025-26 and 2026-27 on account of the unexpected variations, if any, on the controllable and uncontrollable parameters.

(3) All petitions shall be filed in the manner as specified in the Kerala State Electricity Regulatory Commission (Conduct of Business) Regulations, 2003, as amended from time to time.

(4) The applicant shall submit the forecast of Aggregate Revenue Requirement and proposal for revision of tariff, if required, for the financial year or years in this

Control Period, in such manner and within such time limit as specified in these Regulations.

- (5) The formats for furnishing the information required for calculating the expected revenue and expenditure and for determining the tariff shall be as per *Annexure 9* to these Regulations.
- (6) The applicant shall provide all the details supporting the forecast, including but not limited to the details of past performance, proposed initiatives for achieving the efficiency or productivity gains, technical studies, contractual arrangements and/ or secondary research and such other details as required by the Commission, to enable it to assess the reasonableness of the forecast.
- (7) The applicant shall prepare the Aggregate Revenue Requirement based on the projected/trued up figures and shall reasonably forecast the individual variables that constitute the Aggregate Revenue Requirement during the Control Period.
- (8) The applicant shall prepare the forecast of expected revenue from existing tariff and charges based on the following:-
 - (i) In the case of generating business/ company, the generation capacity allocated to the distribution business/ licensees and the expected electricity generation by each unit/ station, for each of the financial years of the Control Period;
 - (ii) In the case of transmission business/ licensee, the transmission capacity allocated to the users of the transmission system and the energy expected to be transmitted, for each of the financial years of the Control Period;
 - (iii) In the case of distribution business/ licensee, the contracted demand and the quantum of electricity to be supplied to the consumers and to be wheeled on behalf of the users of the distribution system, for each of the financial years of the Control Period;
 - (iv) Prevailing tariffs and charges as on the date of preferring the petition.
- (9) Based on the forecast of Aggregate Revenue Requirement and expected revenue from the existing tariff and charges, the generating business/ company or transmission business/ licensee or distribution business/ licensee shall file the sources for meeting the revenue gap, if any, including the efficiency gains, tariff increase or any other means, with complete details of such measures, in the Aggregate Revenue Requirement.
- (10) The Petition shall include among other things the following:-
 - (i) A statement of the existing Schedule of Tariff and Terms and Conditions of Tariff and expected revenue from the existing tariff and charges, for each of the years of the Control Period;
 - (ii) If any revision in tariff is proposed, a statement of the proposed schedule of tariff and terms and conditions of tariff and expected revenue from the proposed tariff and charges, for the relevant year(s) of the Control Period;

- (iii) A statement showing the full details of subsidy received, or due from the State Government, if any, the consumer to whom it pertains and showing how the subsidy is reflected in the existing and proposed tariff applicable to those consumers;
- (iv) A statement of the estimated change in annual revenues that would result from the proposed changes in tariff for the period for which they are to be implemented;
- (v) The audited accounts of the licensed business prepared on the basis of these Regulations along with the audited Financial Statements of the entity. If the audited Financial Statements for the financial year 2020-21 are not available, the audited Financial Statements for the financial year 2019-20 along with the unaudited Financial Statements for the financial year 2020-21:

Provided that separate audited Financial Statements shall be filed by the applicant for each of the regulated business units (i.e. generation, transmission and distribution business and the State Load Despatch Centre).

- (vi) In the case of distribution business/ licensee, if the proposed tariff is to be introduced after the commencement of a financial year, a statement of the proportion of revenue expected and quantities of electricity proposed to be supplied under each period of the proposed tariff modification including the remaining months of the financial year shall be included;
 - (vii) A statement showing the calculation of the amount of cross subsidy in the existing tariff and in the proposed changes in tariff, in respect of each category of consumer;
 - (viii) An explanatory note giving the rationale for the proposed tariff changes;
 - (ix) If the transmission business/ licensee or distribution business/ licensee is engaged in any other business, as specified under *Regulations 61 and 84*; the transmission business/ licensee or distribution business/ licensee shall file the following information:-
 - (a) Name and description of all other businesses that the licensee is engaged in;
 - (b) For each such other business, amount of revenue generated in the financial year 2021-22, estimates for the financial year 2022-23 and projections for the rest of the Control Period;
 - (c) Details of assets and resources of the licensed business used by the licensee, to generate the above revenue;
 - (d) Expenses incurred to generate the above revenue, separately for each business;
 - (e) Proportion of such expenses included in the Aggregate Revenue Requirement of the licensee, if any, the basis of apportionment and justification for the basis of apportionment.
 - (x) Any other information, as required by the Commission.
- (11) If a person holds more than one licence, he shall file separate accounts and details, as above, in respect of each of the licences.

- (12) The above provision applies only when the transmission or distribution licensee is directly engaged in any other business. In all other cases where the transmission business/ licensee or distribution business/ licensee forms a partnership, joint venture (JV) or business relationship with any other entity either regulated/licensed or otherwise, prior approval of the Commission as required under Section 17 of the Electricity Act, 2003 shall apply.
- (13) In the case of a licensee having more than one area of supply, it shall file separate details for each area of supply.
- (14) The generating business/ company shall file generation details station-wise, except for small hydro-electric generating stations, in whose case it may be combined.
- (15) In case the distribution licensee owns and operates a generating station, it shall maintain and file separate accounts of generation, its licensed business and other businesses, if any.
- (16) The tariff determined for a particular financial year shall remain applicable only till the end of such financial year, unless the Commission approves the continuation of such tariff for subsequent periods.
- (17) Digitally signed electronic copy of the petition(s) for approval of Aggregate Revenue Requirement and determination of tariff, as well as financial models with linkages in spreadsheet shall also be filed along with the petition to the Commission.
- (18) If any licensee has more than one business, the common expenses relating to such businesses shall be apportioned among the businesses on appropriate basis and full justification shall be given in writing along with the petition.
- (19) In case the generation business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre does not file the petition under these Regulations within one month of the stipulated date, the Commission may, on its own initiate proceedings under Section 142 of the Act.

11. Specific trajectory for certain variables.–

The Commission, while issuing orders on the petition for approval of the Aggregate Revenue Requirement and determination of tariff, may stipulate trajectories for certain variables such as transmission losses, supply availability, supply disruptions, power factor, power quality, distribution losses or collection efficiency etc. over the Control Period, in addition to the norms specified in these Regulations.

12. Uncontrollable and Controllable factors. –

- (1) For the purpose of these Regulations, the term “uncontrollable factors” shall include but not limited to the following factors, which are beyond the control of and cannot be mitigated by the applicant, as determined by the Commission,-
 - (i) *force majeure* events;
 - (ii) change in law, judicial pronouncements and orders of the Central Government, the Kerala State Government or the Commission;

- (iii) economy wide influences such as unforeseen changes in inflation rate, taxes and statutory levies;
 - (iv) variation in prices of coal, oil and all primary/ secondary fuel;
 - (v) variation in the cost of power purchase due to additional short-term power purchase under special circumstances as specified in *Regulation 78*;
 - (vi) taxes on income;
 - (vii) variation in interest rates;
 - (viii) variation in the number of consumers or mix of the consumers or the quantity of electricity supplied to the consumers.
- (2) The controllable factors include, but are not limited to, the following:-
- (i) variations in capital expenditure on account of time and/or cost overruns/ inefficiencies in the implementation of a project, expenses not approved by the Commission in the scope of a project;
 - (ii) capital cost over-run due to delay by equipment supplier;
 - (iii) variations in capital expenditure on account of time and/or cost over-runs on account of land acquisition issues;
 - (iv) gross station heat rate;
 - (v) secondary fuel oil consumption;
 - (vi) auxiliary energy consumption;
 - (vii) operation and maintenance expenses;
 - (viii) variation in supply availability;
 - (ix) variation in performance parameters;
 - (x) variation in transmission/ distribution loss;
 - (xi) variation in collection efficiency;
 - (xii) provision for bad debts.

The question as to whether any of the above factors was “uncontrollable” shall be as decided by the Commission on a case to case basis.

13. Mechanism for pass through of gains or losses on account of uncontrollable factors. –

- (1) The aggregate gain or loss to the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre, as approved by the Commission during the truing up process, on account of uncontrollable factors shall be adjusted through 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 file details of the variation between the expenses incurred and the revenue earned and the figures approved by the Commission in the order on ARR & ERC, in the format specified in *Annexure 9*, 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 cost of fuel for the generation of electricity in the generating stations owned by the distribution business/ licensee and of variation in the power purchase cost on account of the change in cost of the fuel, which shall be dealt with as specified in *sub-regulations (3), (4) & (5) of Regulation 48 and Regulation 87* of these Regulations.

14. Mechanism for sharing of gains or losses on account of controllable factors.–

- (1) The aggregate gain to the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre, as approved by the Commission on account of the controllable factors, shall be dealt with in the following manner:-
- (i) one-half of the amount of such gain as approved by the Commission shall be passed on to the consumers as rebate in the tariff ;
 - (ii) the remaining half of the amount of such gain, may be utilized 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 *sub-regulations (1), (4), (5), and (6) of Regulation 42*, shall be shared as specified in *Regulation 40* of these Regulations.

- (2) The aggregate loss to the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre, as approved by the Commission on account of the controllable factors, shall be borne by such generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre; and shall not be passed on to the consumers in any manner.
- (3) Expenses relating to pay revision, if any, during the control period, of the Generation business/ company or Transmission business/ licensee or distribution business/ licensee, will be considered for pass through after due prudence check.

15. Truing up of the Aggregate Revenue Requirement and expected revenue from tariff and charges.–

- (1) The year wise Aggregate Revenue Requirement and expected revenue from tariff and charges of a generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre shall be subject to truing up of the expenses and revenue, in accordance with the provisions in these Regulations.
- (2) The generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre shall file a petition for truing up the Aggregate Revenue Requirement and expected revenue from tariff and charges for each of the financial years till 2021-22, within the time limit specified in these Regulations:

- (3) The generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre, as the case may be, shall file to the Commission, the information for the respective year and for the previous year in such form as specified in *Annexure 9 mutatis mutandis*, together with the audited accounts and such other details as the Commission may require to assess the reasons for and the extent of variation in financial performance, if any, from the Aggregate Revenue Requirement and expected revenue from tariff and charges as approved by the Commission:

Provided that the petition for truing up shall be, based on the audited figures for the respective financial years.

- (4) The truing up process shall include a comparison after the prudence check of the financial and operational performance, of the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre, with the approved forecast of Aggregate Revenue Requirement and expected revenue from charges and operational performance; which shall comprise of the following steps:-
- (i) comparison of the performance of the petitioner with the corresponding figures approved by the Commission;
 - (ii) computation of the gains and losses on account of the controllable and uncontrollable factors for the relevant financial year;
 - (iii) review of compliance with the directives issued by the Commission from time to time;
 - (iv) other relevant details, if any; and
 - (v) the Order of the Commission relating to adjustment of the resultant revenue gap/ surplus.
- (5) The Order issued by the Commission on truing up shall also comprise of,-
- (i) the aggregate gain or loss to the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre on account of the controllable factors, as approved by the Commission and the amount of such gains or such losses that may be shared in accordance with *Regulation 14* of these Regulations;
 - (ii) components of the cost pertaining to the uncontrollable factors, as approved by the Commission, which were not recovered and hence have to be approved for recovery through tariffs as per *Regulation 13* of these Regulations;
 - (iii) the revenue gap or revenue surplus, if any after truing up, to be carried forward to the Aggregate Revenue Requirements of subsequent financial years, as decided by the Commission.

CHAPTER – III

PROCEDURE FOR DETERMINATION OF TARIFF

16. Petition for determination of tariff.-

- (1) A petition for determination of tariff shall be made in such form and in such manner, as specified in these Regulations and be accompanied by the applicable fees.
- (2) The proceedings for determination of Tariff shall be undertaken by the Commission in accordance with the KSERC (Conduct of Business) Regulations, 2003, as amended from time to time.
- (3) Notwithstanding anything contained in these Regulations, the Commission shall have the authority to initiate *suo motu* proceedings to determine the Tariff or Fees and Charges of any generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre, including the terms and conditions thereof.

17. Determination of generation tariff. –

- (1) The Commission shall determine the tariff for supply of electricity by the generating business/ company to the distribution business/ licensee, in accordance with the terms and conditions contained in *Chapter V* of these Regulations.
- (2) Existing generating stations, -
 - (i) where the Commission has, at any time prior to 1st day of April, 2022, approved a power purchase agreement between a generating business/ company or a licensee and a distribution business/ licensee the tariff for supply of electricity by the generating business/ company to the distribution business/ licensee shall be in accordance with such agreement and for such period as approved by the Commission.

Provided that as on the 1st day of April, 2022, or thereafter, all PPAs have to be approved by the Commission.
 - (ii) a petition for approval of any power purchase agreement shall be made by the distribution business/ licensee to the Commission within a period of three months from the date of notification of these Regulations;

(3) New generating stations, -

In the case of new generating stations or a new source of power, for the supply of electricity to the distribution business/ licensee, the tariff for such supply shall be as per Section 62 or Section 63 of the Electricity Act, 2003 as the case may be and the distribution licensee shall get the prior approval of this Commission for the power purchase agreement, before availing any power from such stations.

- (4) Generating stations owned by the distribution licensee, -
In the case of generating stations owned by the distribution licensee:
- (i) the transfer price at which electricity is to be supplied by the generation company/business to the distribution licensee shall be determined by the Commission on a yearly basis;
 - (ii) the distribution business/ licensee shall maintain separate accounts and records pertaining to their generation business and shall maintain a consistent allocation policy and statement so as to enable the Commission to clearly identify the direct and indirect costs relating to such business and the capital employed in such business;
 - (iii) The distribution business/ licensee shall file a petition for determination of the tariff/ transfer price, furnishing the information required under *chapter V* of these Regulations relating to its generation business, if any.

18. Determination of tariff for transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre charges. –

- (1) The Commission shall determine the tariff for the transmission business/ licensee, distribution business/ licensee and the State Load Despatch Centre charges based on petition made by the respective business/ licensee and the State Load Despatch Centre, in accordance with the procedure specified in these Regulations.
- (2) The Commission shall determine the tariff for,-
 - (i) Transmission business/ licensee, in accordance with the terms and conditions specified in *chapter VI* of these Regulations;
 - (ii) State Load Despatch Centre charges, in accordance with the terms and conditions specified in *chapter VII* of these Regulations; and
 - (iii) Distribution business/ licensee in accordance with the terms and conditions specified in *chapter VIII* of these Regulations.
- (3) The applicant shall provide, along with the petition to the Commission, such forms as specified in *Annexure 9* to these Regulations, containing full details of the calculation of the Aggregate Revenue Requirement and Expected Revenue from tariff and charges, pursuant to the terms of his licence; and shall thereafter file such further information or particulars or documents as the Commission may at its discretion reasonably require to verify such calculations.
- (4) Wherever necessary, the petition shall be accompanied by a detailed proposal including but not limited to the revision of tariff for bridging the revenue gap in any financial year of the Control Period or gap or surplus, if any arising out of the truing up of accounts.
- (5) The Commission may, from time to time, stipulate additional/supplementary/ alternative formats for the submission of details by the petitioner, as it may as per its assessment reasonably require for assessing the Aggregate Revenue Requirement, truing up of the accounts and for determining the tariff.

19. Procedure for admission of the petition, publishing of notice, filing of suggestions, objections, hearing and Orders on the petition.–

- (1) Upon receipt of a complete petition accompanied by all requisite information, particulars and documents in compliance with all the requirements specified in these Regulations, the Commission shall thereafter, subject to exigencies and practicability, follow the procedure specified in the Kerala State Electricity Regulatory Commission (Conduct of Business) Regulations, 2003; for publication and hearing of the petition.
- (2) The Commission shall, within one hundred and twenty days from the date of admission of a complete petition and after considering all suggestions and objections received from the stakeholders including the public,-
 - (i) issue an order accepting the petition with such modifications or such conditions as may be specified in that order; or
 - (ii) reject the petition for reasons to be recorded in writing, if such petition is not in accordance with the provisions of the Act and the rules and Regulations made thereunder or the provisions of any other law for the time being in force:

Provided that the applicant shall be given reasonable opportunity of being heard, before rejecting his petition.

- (3) The tariff, if any determined by such an order, shall be in force from the date specified in the said order and shall, unless amended or revoked, continue to be in force for such period as may be stipulated therein.

20. Adherence to the tariff order.–

- (1) No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in the manner as specified in *Regulation 85* of these Regulations.
- (2) If the generating business/ company or transmission business/ licensee or distribution business/ licensee recovers a price or charge in excess of the tariff determined in accordance with these Regulations, under Section 62 of the Act, the excess amount so collected shall be paid back to the person who has paid such price or charge, along with interest equivalent to the bank rate and without prejudice to any other liability incurred by such generating business/ company or transmission business/ licensee or distribution business/ licensee.
- (3) The generating business/ company or transmission business/ licensee or distribution business/ licensee shall file quarterly returns, containing data relating to the operational and financial details, to enable the Commission to monitor the implementation of its Order.

CHAPTER - IV
FINANCIAL PRINCIPLES

21. Financial Prudence.-

- (1) The Generating Company or the Transmission or Distribution Licensee or SLDC as is the case shall manage its finances in an optimum and prudent manner.
- (2) In determining the Aggregate Revenue Requirement and Tariff of the Generating Company or the Transmission or Distribution Licensee or SLDC, the Commission shall assess the financial prudence exercised with regard to the following factors:-
 - (i) revenue;
 - (ii) revenue expenditure;
 - (iii) capital expenditure;
 - (iv) any other factors as decided by the Commission.

Provided that the Commission may disallow a part of the Aggregate Revenue Requirement, if it finds the Generating Company or the Transmission or Distribution Licensee has not exercised appropriate prudent steps in its working.

- (3) The financial prudence with respect to revenue shall be assessed in terms of the following parameters:-
 - (i) Whether category-wise sales projections are based on realistic estimates and adequate justification has been provided for any anomalous increase in sales projected by the Distribution Licensee/ in generation projected by the Generating Company;
 - (ii) billing efficiency measured as a percentage of the units billed by the Generating Company or Licensee to the total units injected into the transmission or distribution system, as specified by the Commission;
 - (iii) annual collection efficiency including arrear collection measured as a percentage of the respective licensee/business
 - (iv) reduction in arrears receivable from the beneficiaries/ consumers as specified by the Commission in the ARR & ERC;
 - (v) Whether revenue collected is in line with the projections made in the Petition and approved by the Commission.
- (4) The financial prudence with respect to the revenue expenditure will be assessed based upon but not limited to the following parameters as per criteria as decided by the Commission:-

- (i) monitoring of the revenue expenditure against the income received, so as to ascertain that the expenses and payment obligations to the Generating Company or Licensee to other entities are met in a timely manner;
- (ii) control mechanism put in place by the licensee to ensure that the approved revenue expenditure is adhered to and not exceeded, including adherence to the schedule of interest payments for all borrowings and for working capital needs;
- (iii) where the power procurement is being done on a transparent manner so as to optimize the power purchase expenses;
- (iv) ensuring the optimum purchase of power considering factors such as the requirement of power, Merit Order Despatch, potential for earning additional revenue earning based on the differential between the rate for purchase of power from different sources and the market rate for sale of surplus power, if any:

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

Provided further that the Transmission/Distribution Licensee shall file a detailed cash flow statement for the respective Business Units, showing the various sources of revenue, the actual amount of cash collected against the amount billed to the different consumer categories for sale of electricity, the comparison of the actual revenue expenditure and capital expenditure with the projected and the ARR & ERC approved revenue expenditure and capital expenditure:

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

Provided also that the Transmission/Distribution Licensee shall file the Cost Audit Report along with the true-up Petition to justify the revenue expenses incurred, as well as the inventory management policies.

- (5) The financial prudence with respect to capital expenditure shall be assessed based upon but not limited to the following parameters:-
- (i) whether the projected capital expenditure is based on realistic estimates and prior approval of the Commission has been obtained as per the Commission's directions year on year;

- (ii) whether adequate justification has been provided for any increase in capital expenditure beyond the sanctioned cost and approval of the competent authority obtained for regularizing such expenditure;
- (iii) mechanism put in place for monitoring the physical progress of the projects with respect to their original schedule and to ascertain whether stage payments, if approved in the original sanction, is released only for the quantum of assessed physical progress.
- (iv) optimum and timely drawal of loans in accordance with the physical progress of the capital expenditure schemes, ensuring that there is no idling of funds and such funds are utilized in a most economic and efficient manner.
- (v) in case the actual capital expenditure or capitalization exceeds 10% of that approved by the Commission, the Transmission/Distribution Licensee shall file detailed justification for such excess along with its Petition for True-up;
- (vi) in case any approved scheme has not commenced during the year despite the Commission's approval, detailed justification for such an occurrence be filed along with the Petition for True-up.
- (vii) Complete details of all projects capitalized during the year with full justification and sanctions of the competent authority for any excess expenditure.
- (viii) In case of part capitalization of projects, whether such part capitalization was proposed and approved in the Detailed Project Report (DPR). If not, then the circumstances with full justification for such part capitalization.
- (ix) In the case of assets put to use and capitalized/ part capitalized whether the projects have achieved its intended benefit or is being used partially or for some other purpose.

22. Capital cost and capital structure. –

- (1) In the case of existing generating units/ station or transmission system or distribution system, the capital cost including the additional capitalization, if any, approved by the Commission prior to the first day of April, 2022, and the expenditure projected for the respective financial years of the Control Period, shall form the basis for determination of tariff.
- (2) Capital cost for a new project shall include, -
 - (i) the expenditure incurred or projected to be incurred during the Control Period, including the interest during construction and financing cost and any gain or loss on account of foreign exchange rate variation on the loan, if any, during the construction upto the date of commercial operation of the project, as approved by the Commission after prudence check;
 - (ii) capitalized initial spares, subject to the ceiling norms specified in *Annexure 5*, as may be revised by the Commission from time to time; and

- (iii) expenses incurred by the licensee on obtaining the right of way, as admitted by the Commission after prudence check; and
- (iv) additional capitalization determined under *Regulation 23*:

Provided that the value of the assets forming part of the project but not put to its intended use or not in use, shall be excluded from the capital cost.

- (3) The capital cost approved by the Commission after prudence check shall form the basis for determination of tariff.
- (4) If sufficient justification along with the approval of the competent authority is provided by the generation business/ company, transmission business/ licensee or the distribution business/ licensee 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 capital cost approved by the Commission, 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. The Generating Company or the Transmission/Distribution Licensee shall however give a full justification for the cost reduction especially after reviewing whether the capital cost estimates were incorrect or exaggerated.

- (5) Where power purchase agreement or Transmission Service Agreement provides for a ceiling of capital cost, the capital cost to be considered for determination of tariff shall not exceed such ceiling.
- (6) The capital cost estimates may include the cost of initial insurance spares as a percentage of the approved cost of plant and machinery upto the cut-off date, subject to the ceiling norms specified in *Annexure 5*, as may be revised by the Commission from time to time:

Provided that where the generating station has any transmission equipment approved as its capital cost, the ceiling norms for the initial spares for such equipment shall be as per the ceiling norms specified for transmission system under these Regulations:

Provided further that once the transmission system has commenced commercial operation, the cost of initial spares shall, at the time of truing up shall, be restricted on the basis of the cost of plant and machinery corresponding to the transmission project:

Provided also that for the purpose of computing the cost of initial spares, the cost of such plant and machinery shall be considered as part of the project cost as on the cut-off date excluding; the interest during construction, cost of land and cost of civil works.

- (7) Any expenditure on replacement, renovation and modernization or extension of life of old fixed assets, as applicable to the generating business/ company, transmission

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

Net Value of Replaced Assets = OCRA – (AD + CC);

Where, OCRA = Original Capital cost of Replaced Assets;

AD = Accumulated Depreciation pertaining to the replaced assets;

CC = Total Consumer Contribution pertaining to the replaced assets, if any:

Provided that the amount of insurance proceeds received, if any, towards the damage to any asset requiring replacement shall be first adjusted towards the outstanding actual or normative loan; and the balance amount, if any, shall be utilized to reduce the capital cost of such replaced asset, and any further balance amount shall be considered as non tariff income.

23. Additional capitalization. –

- (1) The Commission may, subject to prudence check, approve the capital expenditure actually incurred or projected to be incurred after the date of commercial operation and upto the cut-off date, on the following counts, provided such expenditure is duly audited and approved by the competent authority and is within the original scope of work,-
 - (i) due to the un-discharged liabilities, recognized to be payable at a future date;
 - (ii) the approved works deferred for execution;
 - (iii) liabilities to meet any award of arbitration or compliance of directions or order of a statutory authority or order or decree of a court of law announced subsequently;
 - (iv) on account of any change in law or compliance of an existing law;
 - (v) on procurement of initial spares included in the original project costs, subject to the ceiling norm laid down in *Annexure 5* to these Regulations;
 - (vi) 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 after its approval by the competent authority; and
 - (vii) Force majeure events.
- (2) The details of the work included in the original scope of work and the estimates of expenditure for such work shall be filed for approval of additional capitalization if any, along with the petition for tariff.
- (3) All particulars of the un-discharged liabilities and works deferred for execution shall be filed with detailed justification for the deferment along with the petition for final tariff after the date of commercial operation of the generating unit/ station or transmission system or distribution system.
- (4) The assets forming part of the project cost but not put to its intended use shall not be approved for determination of tariff.

- (5) Any expenditure approved 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 debt: equity ratio specified in *Regulation 26*.
- (6) Any expenditure approved by the Commission for determination of tariff on account of new works not included in the original scope of work shall be serviced in the same debt: equity ratio as specified in *Regulation 26*.
- (7) Any expenditure approved by the Commission for determination of tariff on renovation, modernization, life extension or restoration of assets damaged shall be serviced in the debt-equity ratio specified in *Regulation 26*, after writing off the residual value of the asset from its original capitalized cost.
- (8) Impact of additional capitalization on tariff, if any, shall be considered subject to the Commission's scrutiny and prudence check at the time of truing up for each financial year.

24. Interest during construction (IDC).–

- (1) Interest during construction shall be computed by the licensee based on the loan corresponding from the date of drawal of debt funds or when the actual work has commenced, whichever is later, and after taking into account the prudent phasing of funds upto the scheduled date of commercial operation.
- (2) In the case of additional liability on account of interest during construction due to delay in the declaration of COD within the scheduled date, the generating business/ company or the transmission business/ licensee or the distribution business/ licensee shall be required to furnish to the Commission detailed justification with supporting documents for such delay including the details regarding prudent phasing of funds.
- (3) If the delay is not attributable to the generating business/ company or the transmission business/ licensee or the distribution business/ licensee but due to uncontrollable factors as specified in *Regulation 12* of these Regulations, interest during construction may be allowed after due prudence check provided due approval of the competent authority has been obtained.
- (4) Interest during construction on the actual loan/ part thereof may be allowed beyond the date of commercial operation, only if the delay is found to be beyond the control of the generating business/ company or the transmission business/ licensee or the distribution business/ licensee, after taking into account the prudent phasing of funds and after prudence check and after ascertaining that approval for the delay and increase in cost is due to this count has been obtained from the competent authority.

25. Consumer contribution, deposit work, capital subsidy or grant. –

- (1) Works of the following nature carried out by the generation business/ company, transmission business/ licensee or distribution business/ licensee shall be classified

under the categories of consumer contribution, deposit work, capital subsidy or grant,-

- (i) capital works undertaken after obtaining a part or all of the funds from the users/ consumers;
 - (ii) capital works undertaken by utilizing the capital subsidies or grants received from the State and/or Central Governments or any other sources;
 - (iii) 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 assets created out of contribution or grants or deposit works or capital subsidy shall be treated as follows:-
- (i) O&M expenses as specified in these Regulations shall be allowed provided that the asset has been transferred to the licensee's account and is responsible for its maintenance and upkeep;
 - (ii) provisions for depreciation, as specified in *Regulation 27*, shall not be allowed to the extent of financial support provided through consumer contribution, deposit work, capital subsidy or grant; and
 - (iii) Provisions related to return on equity share capital or net fixed assets as applicable, as per *Regulation 28* shall not be allowed to the extent of financial support provided through consumer contribution, deposit work, capital subsidy or grant.

26. Debt - Equity ratio.-

- (1) For the purpose of determination of tariff, the debt equity ratio as on the date of commercial operation in the case of a new generating station, transmission line and distribution line/ equipment/ accessories or substation commissioned or capacity expanded on or after the first day of April, 2022, shall continue to be 70:30 of the capital cost as approved by the Commission:

Provided that the debt-equity ratio shall be applied only to the balance of such approved capital cost after deducting the financial support provided through consumer contribution, deposit work, capital subsidy or grant, if any.

- (2) Where equity employed is more than thirty percent of the approved capital cost, the amount of equity for the purpose of tariff shall be limited to thirty percent 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 thirty percent of the capital cost, the actual equity shall be considered and the balance of the Commission approved capital cost after adjusting for grants and/ or contribution shall be treated as normative loan.
- (4) If any fixed asset is capitalized on account of capital expenditure incurred prior to the first day of April, 2022, the debt-equity ratio allowed by the Commission for

determination of tariff for the period ending on the thirty first day of March, 2022, shall be considered.

- (5) The equity invested in foreign currency, if any, or any loan in foreign currency, shall be designated in equivalent Indian rupees, at the exchange rate specified by the Reserve Bank of India as on the date of each such 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 thirty percent or the actual equity component for the asset, if it is lower than thirty percent of the original cost of the retired or replaced asset based on documentary evidence.
- (7) Swapping of foreign currency loans shall be permitted provided:
 - (i) it does not have the effect of increasing the tariff;
 - (ii) the cost of swapping and interest expenses thereon, shall be allowed by the Commission only after prudence check;
 - (iii) The generating business/ company or transmission business/ licensee or distribution business/ licensee shall provide full particulars of the swapped loans;
 - (iv) Prior approval of the Commission shall be obtained before entering into any foreign currency swap.
- (8) Restructuring of capital in terms of the relative share of equity and loan shall be permitted during the life of the project provided:
 - (i) It does not have the effect of increasing the tariff;
 - (ii) any benefit from such restructuring shall be shared in the ratio 1:1 among,-
 - a) the generating business/ company and the persons sharing the capacity charge; or
 - b) the transmission business/ licensee and the long-term intra-State open access customers including the distribution business/ licensee; or
 - c) The distribution business/ licensee and its consumers.

27. Depreciation.–

- (1) Depreciation shall be calculated on the original capital cost of the asset as approved by the Commission:

Provided that, no depreciation shall be allowed on the increase in value of the assets, on account of revaluation of assets:

Provided further that the depreciation shall be allowed on the assets capitalized on or after 01.04.2022 irrespective of their source ie. whether created through consumer contribution, deposit works, capital subsidies and grants, on the condition that such amount shall be deposited in a separate depreciation fund account which shall be utilized for the development/ improvement in the Generation/Transmission/Distribution system with the prior approval of the Commission.

- (2) The generation business/ company or transmission business/ licensee or distribution business/ licensee shall be permitted to recover depreciation on the approved capital cost of fixed assets used in their respective business, computed in the following manner:-
- (i) depreciation shall be allowed upto a maximum of 90% of the approved capital cost of asset.
 - (ii) depreciation shall be computed annually based on the straight line method at the rates specified in *Annexure 1* to these Regulations for the first thirteen financial years from the date of Commercial operation;
 - (iii) the remaining depreciable value as on the thirty first day of March of the financial year ending after a period of thirteen financial years from the date of Commercial operation shall be spread over the balance useful life of the assets;
 - (iv) the generating business/ company or transmission business/ licensee or distribution business/ licensee, shall file all such details and documentary evidence, as may be required under these Regulations and as may be required by the Commission from time to time, to substantiate the above claims;
 - (v) No depreciation shall be allowed for assets created out of contribution and grants prior to 01.04.2022. However assets created from 01.04.2022 out of contributions and grants will be eligible for claiming depreciation.
 - (vi) the salvage value of the fully depreciated asset shall be ten per cent of the allowable capital cost as approved by the Commission

Provided that the salvage value of Information Technology equipment and computer software shall be considered at zero percent of the allowable capital cost.

- (3) Land, other than the land held under lease and the land for reservoir in the case of hydel generating station, shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing the depreciable value of the assets.
- (4) In case the land is held on lease, the lease premium paid will be eligible for depreciation over the lease period.
- (5) Depreciation against assets relating to environmental protection shall be allowed on a case-to-case basis at the time of fixation of tariff, subject to the condition that the environmental standards as prescribed have been complied with during the previous tariff period.
- (6) In the case of existing assets, the balance depreciable value of the asset as on the first day of April, 2022, shall be worked out by deducting the cumulative depreciation approved by the Commission upto the thirty first day of March, 2022, from the gross depreciable value of the assets.
- (7) Depreciation shall be chargeable from the first financial year of Commercial operation:

Provided that in case the COD of the asset is declared during the course of the financial year, depreciation shall be charged on a daily pro-rata basis:

Provided further that depreciation shall be re-calculated for assets capitalized during the financial year at the time of truing up, based on the documentary evidence for capitalization of assets filed by the applicant, subject to prudence check of the Commission, in such a way that the depreciation is calculated proportionately from COD.

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

28. Return on Equity Share capital or Net Fixed Assets. –

- (1) Return on equity shall be computed in rupee terms, on the paid up equity share capital determined in accordance with *Regulation 26* above and shall be allowed at the rate of fourteen percent (14%) per annum:

Provided that at the time of approving the Aggregate Revenue Requirements, return on equity share capital for the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre, shall be allowed on the amount of equity share capital approved by the Commission for the assets put to its intended use at the commencement of the financial year and on fifty percent of the equity share capital portion of the approved capital cost for the investment put to its intended use during the financial year:

Provided further that at the time of truing up of accounts of the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre, return on equity share capital shall be allowed on daily pro-rata basis, taking into consideration the documentary evidence provided by generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre for the assets put to use during the financial year:

Provided also that, if the equity share capital or any portion of it, invested in the generating business/ company, transmission business/ licensee or distribution business/ licensee is part of any scheme or programme funded by the Central Government or State Government for which no return is payable to the Central or State Government, such portion of the equity shall not be eligible for any form of return subject to provisions under *Regulation 27* to these Regulations.

- (2) If there is no equity share capital invested in the business or the equity invested in the regulated business of the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre or such equity share capital is not clearly identifiable, return at the rate of 7.00% percent shall be allowed on the net fixed assets at the beginning of the financial year for such regulated business:

Provided that the net fixed assets shall be exclusive of the assets created out of consumer contribution, deposit works, capital subsidy or grants.

29. Interest, Finance charges and Carrying cost. –

- (1) The loans arrived at in the manner indicated in *Regulation 26* shall be considered as gross normative loan for calculation of interest on the loans:

Provided that the interest and finance charges on capital works in progress shall be excluded from such consideration and will not be considered in the ARR and truing up processes:

Provided further that in case of retirement or replacement of the assets, the normative loan amount approved by the Commission shall be reduced to the extent of outstanding loan component of the original value of the retired or replaced assets; based on documentary evidence.

- (2) The normative loan outstanding as on the first day of April, 2022, shall be worked out by deducting the amount of cumulative repayment as approved by the Commission upto the thirty first day of March, 2022, from the normative loan.
- (3) 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 financial year of the declaration of the commercial operation date of the project and shall be equal to the depreciation allowed for that financial year.
- (4) The rate of interest allowed shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each financial year applicable to the generating business/ company or the transmission business/ licensee or the distribution business/ licensee or State Load Despatch Centre:

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

Provided further that if the generating business/ company or the transmission business/ licensee or the distribution business/ licensee or State Load Despatch Centre does not have any actual loan outstanding, but normative loan is outstanding, then interest shall be allowed at the base rate.

- (5) The interest on loan shall be calculated on the normative average loan as per the norms approved by the Commission for the financial year, by applying the weighted average rate of interest.
- (6) The generating business/ company or the transmission business/ licensee or the distribution business/ licensee or the State Load Despatch Centre, as the case may be, shall make every effort to re-finance the loan so as to reduce the internal costs

and to effect net savings on interest. In that event the costs associated with such re-financing shall be borne by the beneficiaries and any benefit from such refinancing shall be shared in the ratio 1:1 among,-

- (i) the generating business/ company and the persons sharing the capacity charge; or
 - (ii) the transmission business/ licensee and long-term intra-State open access customers including distribution business/ licensee; or
 - (iii) The distribution business/ licensee and consumers.
- (7) The changes to the terms and conditions of the loans during the financial year, if any, shall be effective from the date of coming into force of such changes.
- (8) Interest shall be allowed on the amount held as security deposit in cash from the users of the transmission system or distribution system and the consumers, at the bank rate as on the first day of April of the financial year in which the petition is filed:

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

- (9) The Commission shall allow Carrying Cost or Holding Cost, as the case may be, on the admissible amounts, with simple interest, at the weighted average rate of interest on loans prevailing during the concerned year:

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

Provided further that in the case of Distribution Licensees the Incentive on account of the applicable distribution losses due to the licensee, shall be deducted from the net entitlement for computing the carrying cost or holding cost.

Provided also that in case the distribution licensee is holding security deposit over and above their working capital requirement, interest on such excess security deposit shall be deducted from carrying cost

30. Interest on bonds issued by KSEB Limited to service the terminal liabilities of its employees. –

- (1) The interest on the bonds issued by KSEB Limited to service the terminal liabilities of its employees shall be allowed for recovery through tariffs, at the rates stipulated in the relevant orders issued by the Government of Kerala.
- (2) The bonds shall be amortized at the same rate as prescribed in the Transfer Scheme notified by the Government of Kerala.
- (3) The funds required for repayment of the bonds issued by KSEB Limited to service the terminal liabilities of its employees shall not be allowed for recovery through tariff.

31. Tax on returns. –

- (1) The Commission shall provisionally approve the Income Tax payable for the appropriate years of the Control Period, if any, based on the permissible return on equity share capital or return on net fixed assets, as approved by the Commission relating to the generating business/ company or transmission business/ licensee or distribution business/ licensee or the State Load Despatch Centre, as the case may be and included in the Aggregate Revenue Requirements:

Provided that no Income Tax on the amount of efficiency gains or incentive earned by the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre shall be approved for recovery through the tariff or charges from the consumers or beneficiaries.

- (2) The difference between the Income Tax on regulated business actually paid and that approved by the Commission in the Aggregate Revenue Requirement of the generating business/ company or transmission business/ licensee or distribution business/ licensee or the State Load Despatch Centre shall, subject to prudence check, be adjusted in the truing up process in the respective years.
- (3) The tax on any income other than from the regulated business shall not in any circumstances be allowed to be recovered through Aggregate Revenue Requirements or at the truing up stage.
- (4) Changes, if any, in taxes other than income tax otherwise allowed as pass through in the tariff, shall be considered for determination of aggregate revenue requirements after prudence check.

32. Interest on Working capital.–

- (1) The generation business/ company or transmission business/ licensee or distribution business/ licensee or the State Load Despatch Centre shall be allowed interest on the normative level of working capital for the financial year, computed as under,-
 - (i) In the case of liquid fuel based generating stations, the working capital shall comprise of,-
 - a) cost of liquid fuel for one month corresponding to approved generation; plus
 - b) operation and maintenance expenses for one month; plus
 - c) cost of the maintenance spares at one per cent of the historical cost of the plant and equipments; plus
 - d) receivables equivalent to the fixed charges and energy charges for sale of electricity for one month calculated at the approved generation:

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

- (ii) In the case of gas turbine/ combined cycle generating stations the working capital shall comprise of,-
- a) cost of gas and liquid fuel for one month corresponding to approved generation; plus
 - b) operation and maintenance expenses for one month; plus
 - c) cost of maintenance spares at one per cent of the historical cost of plant and equipments; plus
 - d) receivables equivalent to fixed charge and energy charge for sale of electricity for one month calculated at approved generation:

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

- (iii) In the case of hydro-electric generating stations the working capital shall comprise of,-
- a) operation and maintenance expenses for one month; plus
 - b) cost of maintenance spares at one per cent of the historical cost of plant and equipments; plus
 - c) receivables equivalent to fixed cost of one month:

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

- (iv) In the case of transmission business/ licensee the working capital shall comprise of,-
- a) operation and maintenance expenses for one month; plus
 - b) cost of maintenance spares at one per cent of the historical cost of plant and equipment; plus
 - c) receivables equivalent to transmission charges for one month calculated at target availability:

Provided that the amount, if any, held as security deposits except the security deposits held in the form of bank guarantee from users of the transmission system shall be reduced while computing the working capital requirement.

- (v) In the case of distribution business/ licensee the working capital shall comprise of,-
- a) operation and maintenance expenses for one month; plus
 - b) cost of maintenance spares equivalent to one-twelfth of the average of the book value of stores, materials and supplies at the beginning and end of the financial year; plus
 - c) receivables equivalent to the expected revenue from sale of electricity for two months at the prevailing tariff:

Provided that the amount, if any, held as security deposits except the security deposits held in the form of Bank Guarantee from the users of the distribution system and consumers shall be reduced while computing the working capital requirement:

Provided further that, in the case of distribution business/ licensees, who are supplying electricity to their consumers on prepaid metering system, interest on working capital shall not be allowed.

- (vi) In the case of the State Load Despatch Centre the working capital shall comprise of,-
 - a) operation and maintenance expenses for one month; plus
 - b) cost of maintenance spares at one per cent of the historical cost of plant and equipments; plus
 - c) receivables equivalent to State Load Despatch Centre charges for one month.
- (2) Interest on normative level of working capital as per this Regulation shall be allowed at a rate equal to two percentage higher than the base rate as on the first day of April of the respective financial year, in respect of which the petition for approval of Aggregate Revenue Requirement and determination of tariff is filed.
- (3) In case there is no requirement of working capital due to the excess security deposit held by the distribution licensee, then such excess amount held beyond the working capital requirements shall be treated as funds available and interest on such amounts shall be included in the "Other Income" of the licensee.

33. Decommissioning / Decapitalization of Assets .-

- (1) The generation business/ company or the transmission business/ licensee or the distribution business/ licensee or the State Load Despatch Centre shall file to the Commission, along with the petition for approval of the Aggregate Revenue Requirement, the written down value and such other details of the assets decommissioned/ decapitalized, if any, during the financial years of the previous control period commencing from 2018-19.
- (2) The Commission may consider such details and take appropriate decisions while computing the Aggregate Revenue Requirement.

34. Principles for adoption of Transfer Scheme for KSEB under Section 131 of the Act.-

The Commission may, for the purpose of approval of the Aggregate Revenue Requirements and determination of tariff, adopt the changes in the balance sheet, due to the re-organization of the erstwhile Kerala State Electricity Board, as per the provisions of the Transfer Scheme published by the Kerala State Government under Section 131 of the Act, subject to the following principles:-

- (i) Increase in the value of assets consequent to the revaluation of assets shall not qualify for computation of depreciation or for return on net fixed assets;

- (ii) The equity of the Government of Kerala as per the above Transfer Scheme published vide Government Order No. GO(P) 46/2013/PD dated 31.10.2013 and GO(P) No. 3/2015/PD dated 28.01.2015 under *Section 131* of the Act will be considered for computation of return on equity;
- (iii) The reduction of the contribution from consumers, grants and such other subventions for creation of assets, made as part of Transfer Scheme, shall not be considered while computing the depreciation;
- (iv) Only the payment of interest on the bonds issued to the Master Trust will be approved for computation of Aggregate Revenue Requirement and the amount of repayment of such bonds shall not be reckoned for computation of Aggregate Revenue Requirement;
- (v) The Commission may subject to the petition by KSEB Ltd may take appropriate decision on the other issues relating to the Transfer Scheme and its implementation, on case to case basis.

CHAPTER – V

GENERATION

35. Applicability. –

- (1) The Regulations specified in this Chapter shall apply to the determination of tariff for supply of electricity to the distribution business/ licensee by a generating company from conventional sources of generation; such as coal, gas, liquid fuel and from hydro-electric plants (of capacity exceeding 25 MW):

Provided that the determination of tariff for supply of electricity to the distribution business/ licensee from cogeneration plants, solar plants, small hydro-electric projects, wind energy projects and other renewable energy sources of generation shall be governed by the (Renewable Energy and Net Metering) Regulations, 2020 as amended by the Commission from time to time.

- (2) The Commission shall determine the tariff for supply of electricity by the generating business/ company to the distribution business/ licensee, in accordance with the terms and conditions specified in this Chapter, in the following cases:-
 - (i) where such tariff is to be determined pursuant to a power purchase agreement entered into subsequent to the date of coming into effect of these Regulations; or
 - (ii) where the distribution licensee themselves is engaged in the business of generation of electricity, for determination of the transfer price at which electricity is supplied by the generation business to the distribution business/ licensee.

36. Capital cost. –

- (1) Capital cost for a new project shall, subject to prudence check, include the following:-
 - (i) the expenditure incurred or proposed to be incurred;
 - (ii) Interest during construction and financing charges on the loan component;
 - (iii) any gain or loss on account of the foreign exchange rate variation, if applicable, on the loan during the construction upto the date of commercial operation of the project, as approved by the Commission;
 - (iv) Increase in cost of contract packages, as approved by the Commission after prudence check;
 - (v) capitalized cost of initial spares subject to the ceiling rates specified in *Annexure 5*;
 - (vi) additional capitalization approved under *Regulation 23*;
 - (vii) adjustment of income received from the sale of infirm power in excess of the fuel cost prior to the date of commercial operation:

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

- (2) The capital cost in the case of a new generating station shall also include,-
 - (i) Cost of the approved Rehabilitation and Resettlement Plan of the project in conformity with the provisions in the '*Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013*', as approved;
 - (ii) The contribution of the generating company towards the cost of development activities, if any, in the project affected area, as may be approved by the Commission.

- (3) The capital cost of an existing generating unit/ station shall include the following:-
 - (i) the capital cost approved by the Commission as on the first day of April 2022, based on the available trued up figures as on 31st March, 2022, by excluding the liability, if any;
 - (ii) additional capitalization, if required, for the respective financial year, as determined in accordance with *Regulation 23*; and
 - (iii) Expenditure on account of the renovation and modernization, as approved by the Commission in accordance with *Regulation 38*.

- (4) In relation to multi-purpose hydro-electric 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.

37. Prudence check of Capital cost.–

The Commission shall adopt but not limited to as the situation warrants the following principles for prudence check of the capital cost of new projects:-

- (i) In the case of thermal generating station, prudence check of capital cost may be carried out taking into consideration the benchmark norms specified by the Central Electricity Regulatory Commission from time to time;
- (ii) In the case 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;
- (iii) In the cases where benchmark norms have been specified, the generating company which exceeds the benchmark norms, shall file detailed justification with complete documentation for exceeding the capital cost vis-a-vis the benchmark norms to the satisfaction of the Commission, for allowing any cost above the benchmark norms;
- (iv) The Commission may engage an independent agency or an expert to scrutinize the capital cost of any hydro-electric generation project and their

recommendation may be considered by the Commission while determining the tariff for the hydroelectric generation project:

Provided that the Commission shall hear the concerned applicant and other stakeholders before taking a final decision on the report of such agency or expert.

38. Renovation, Modernization and Uprating (RMU).–

- (1) The generating business/ company shall, for meeting the expenditure on renovation, modernization and uprating of the generating station or a generating unit thereof, files a petition before the Commission for consideration of the proposal. This petition shall necessarily include a detailed project report giving; the 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 generation business/ company or as called for by the Commission.
- (2) Where the generating business/ company files a petition for approval of its proposal for renovation, modernization and/or uprating, the proposal shall be subject to due prudence check 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 before the approval is granted.
- (3) Any expenditure incurred and approved or projected to be incurred and approved by the Commission after prudence check of the estimates for renovation, modernization or uprating and after deducting the accumulated depreciation already recovered from the original project cost, shall form the basis for determination of the tariff w.e.f. COD.

39. Petition for determination of generation tariff for existing and new generating station or generating unit.–

- (1) Tariff in respect of a generating station under these Regulations may be determined unit-wise or for the whole generating station or group of stations based on the Capital expenditure proposal as approved by the Commission:

Provided that the terms and conditions for determination of tariff for generating stations specified in this Chapter shall apply in a like manner to stages or units, as the case may be, as in the case of such generating stations.

- (2) Where the tariff is being determined for the stage or the generating unit of a generating station, the generating company shall adopt a reasonable and justifiable basis for apportionment of capital cost relating to common facilities and apportionment of joint and common costs across all the stages or generating units, as the case may be.

- (3) The generation business/ company shall maintain an apportionment statement providing the basis for allocation of such costs, which shall be duly audited and certified by the statutory auditors and file such audited and certified statement to the Commission along with the petition for determination of tariff.
- (4) In the case of an existing generating unit/ station, the petition for determination of generation tariff if required shall be made, not later than one hundred and eighty days from the date of notification of these Regulations, based on the approved capital cost including any additional capital expenditure already approved upto thirty first day of March, 2022, based either on actual or on projected additional capital expenditure and estimated additional capital expenditure, duly certified by the statutory auditors for the Control Period. The petition shall also clearly mention the circumstances under which the tariff petition could not be filed earlier with full justification thereof:

Provided that the generation business/ company shall continue to bill the beneficiaries at the tariff approved by the Commission and applicable as on the thirty first day of March, 2022, for the period starting from the first day of April, 2022, till the 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, one hundred and eighty days prior to the anticipated date of commercial operation of the generating unit or stage or generating station as a whole, as the case may be.
- (6) The generation business/ company shall make a petition for determination of tariff based on capital expenditure incurred or projected to be incurred upto the date of commercial operation and additional capital expenditure proposed to be incurred, duly certified by the statutory auditors:

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

- (7) In the case of new projects, the generating company may be allowed a provisional tariff by the Commission, from the anticipated date of commercial operation, based on a petition filed by the generating company with full details after conducting the due process including prudency check of the projected capital expenditure.
- (8) If the date of commercial operation is delayed, beyond one hundred and eighty days from the date of issue of the tariff order, the provisional tariff so granted shall be deemed to have been withdrawn and the generation business/ company shall be required to file after the date of commercial operation of the project, a fresh petition for determination of tariff.
- (9) The generation business/ company shall file the petition for determination of final tariff for new generating station unit or stage, within one hundred and eighty days from the date of commercial operation of the generating unit or stage or generating station as a whole, as the case may be; based on the certified capital expenditure by the Statutory auditor and capitalization statement, as on the date of commercial operation.

- (10) Truing up of the capital cost for the new generating station shall be done by the Commission based on prudence check of the audited capital expenditure and the capitalization petition, as on the date of commercial operation.
- (11) Where the actual capital cost incurred on year to year basis is lesser than the capital cost approved for determination of tariff by the Commission the capital cost as on the date of commercial operation or on the basis of the provisional additional capital cost, by five percent or more, the generation business/ company shall refund to the beneficiaries, as approved by the Commission, the excess tariff realized corresponding to the excess capital cost, along with interest at 1.20 times, the weighted average rate of interest approved by the Commission, for the respective financial year.
- (12) Where the actual capital cost incurred on year to year basis is higher than the capital cost approved for by the Commission the capital cost as on the date of commercial operation or on the basis of the provisional additional capital cost, by five percent or more, the generation business/ company shall, subject to the approval of the Commission, be entitled to recover from the beneficiaries the shortfall in tariff corresponding to such decrease in capital cost along with interest, at 0.80 times the weighted average rate of interest approved by the Commission, for the respective financial year.

40. Sharing of gains or losses on account of the controllable and uncontrollable factors.–

- (1) Notwithstanding anything contained in these Regulations, the financial gains or losses on account of the controllable factors, computed as per the following formulae; in the case of the generating stations, on account of the normative operational parameters specified in sub-regulations (1), (4), (5) and (6) of Regulation 42 of these Regulations, shall be shared in the ratio of 2:1 between the generating station and the beneficiaries,-

Net Gain = $(ECR_N - ECR_A) \times \text{actual energy generated}$, where $ECR_N > ECR_A$;

Net Loss = $(ECR_A - ECR_N) \times \text{actual energy generated}$, where $ECR_A > ECR_N$;

Where; **ECR_N** is the normative rate of energy charge computed on the basis of the norms specified for gross station heat rate and auxiliary consumption for the month;

ECR_A is the actual rate of energy charge computed on the basis of actual gross station heat rate and auxiliary consumption for the month.

- (2) The financial gains of the generation business/ company on account of the controllable parameters computed under sub-regulation (1) above shall be shared between the generation business/ company and the beneficiaries on monthly basis, with annual reconciliation.
- (3) The aggregate loss to the generating business/ company on account of the controllable parameters computed under sub-regulation (1) above shall be borne by the generating business/ company and shall not be passed on to the consumer in any manner.

- (4) The financial gains or losses by the generation business/ company on account of the uncontrollable parameters shall, subject to approval by the Commission after prudence check, be passed on to the beneficiaries of the generation business/ company.

41. Norms of Operation for Hydro-electric generating stations of KSEB Ltd.–

- (1) Normative Annual Plant Availability Factor (**NAPAF**), for recovery of the full annual capacity charges and incentives, shall be as specified hereunder:-
- (i) The NAPAF for the following existing storage and pondage type of hydroelectric generating stations of KSEB Limited, where the variation in head between the Full Reservoir Level (FRL) and the Minimum Draw Down Level (MDDL) is of and below eight percent of their respective design heads, shall be as specified in the table V(1) below:

Table V (1)

Sl. No	Station	Type (Pondage/ Storage)	NAPAF %
1	Idukki	Storage	90
2	Kuttiady	Storage	90
3	Pallivasal	Storage	90
4	Sengulam	Pondage	90

Provided that the Commission may based on a petition filed by KSEB Ltd. consider revising the NAPAF for the above mentioned generating stations, in the case of their renovation, modernization and/or uprating:

Provided further that the generating station shall be allowed benefits of deemed generation over and above the actual generation, for the period during which the generating station is backed down on the instruction of the State Load Despatch Centre:

Provided also that the deemed generation shall not be reckoned for the purposes of calculating the incentive.

- (ii) NAPAF for the following existing storage and pondage type hydroelectric generating stations, where the variation in head between the full reservoir level and the minimum draw down level is more than eight percent of their respective design heads, shall be as specified in the table V(2) below:

Table V (2)

Sl. No	Station	Type (Pondage/Storage)	NAPAF %
1	Sabarigiri	Storage	90
2	Sholayar	Storage	89
3	Poringalakuthu	Storage	89
4	Panniar	Storage	89
5	Kakkad	Pondage	88
6	Idamalayar	Storage	77

Provided that the Commission may based on a petition filed by KSEB Ltd. consider revising the NAPAF for the above mentioned generating stations, in the case of their renovation, modernization and/or uprating:

Provided further that the generating station shall be allowed deemed generation over and above the actual generation, for the period during which the generating station is backed down on the instructions of the State Load Despatch Centre:

Provided also that the deemed generation shall not be reckoned for the purposes of calculating the incentive.

- (iii) The NAPAF for new storage and pondage type hydro-electric generating stations where the variation in head between the full reservoir level (FRL) and the minimum draw down level (MDDL) is of and below 8 percent of their respective design heads and where the plant availability is not affected by silt, shall be ninety percent;
 - (iv) For new storage and pondage type hydro-electric generating stations where the variation in head between the full reservoir level and the minimum draw down level is more than eight percent of their respective design heads and where plant availability is not affected by silt, the month wise peaking capability as provided by the project authorities in the detailed project report, approved by Central Electricity Authority or by the State Government, shall form the basis for fixation of NAPAF;
 - (v) The NAPAF for new run-of-the-river type hydro-electric generating stations shall be determined station-wise, based on ten days design energy data, moderated by past experience, if available based on a petition filed by the Generator.
- (2) Auxiliary energy consumption including transformation losses for the new hydro-electric generating stations shall be as specified in the table V(3) below:

Table V (3)

Type of station	Station Capacity upto 200MW	Station Capacity above 200MW
Surface hydro-electric generating stations		
Rotating Excitation	0.7%	0.7%
Static Excitation	1.2%	1.0%
Underground hydro-electric generating stations		
Rotating Excitation	0.9%	0.9%
Static Excitation	1.3%	1.2%

- (3) Auxiliary energy consumption including transformation losses for the existing hydro-electric generating stations shall be as specified in the table V(4) below:

Table V4

Sl.no	Station	Type of Station		Auxiliary Consumption (%)
		Surface Hydro / Underground	Excitation system	
(i)	Idamalayar	Surface Hydro	Static	0.10%
(ii)	Idukki	Underground	Static	0.53%
(iii)	Kakkad	Surface Hydro	Rotating	0.71%
(iv)	Kuttiady	Surface Hydro	Rotating	0.24%
(v)	Lower Periyar	Surface Hydro	Static	0.13%
(vi)	Neriamangalam	Surface Hydro	Static	0.18%
(vii)	Pallivasal *	Surface Hydro	Brushless	1.00%
(viii)	Panniar	Surface Hydro	Static	0.53%
(ix)	Poringalakuthu	Surface Hydro	Brushless	0.44%
(x)	Sabarigiri	Surface Hydro	Static	0.22%
(xi)	Sengulam	Surface Hydro	Static	0.15%
(xii)	Sholayar	Surface Hydro	Brushless	0.18%

* Includes energy consumption for pumping water to Sengulam pumped storage facility

- (4) Actual energy consumed for pumping water for the pumped storage hydroelectric generating station shall be treated as auxiliary energy consumption, in addition to the quantum given in the table above, after prudence check.

42. Norms of Operation for thermal generating stations.–

- (1) **The Normative Annual plant availability factor (NAPAF), Gross Station Heat Rate (GSHR) and Auxiliary Energy Consumption (AEC)** for the full recovery of annual fixed charges for liquid fuel based generating stations of KSEB Limited, shall be as specified in the table V(4) below:

Table V (5)

Station	NAPAF (%)	GSHR (kcal/ kWh)	Auxiliary Energy Consumption (%)
Brahmapuram Diesel Power Plant	80	2000	5.0
Kozhikode Diesel Power Plant	80	2100	2.5

Notes:

- (i) The NAPAF shall be worked out based on the availability during the peak hours (from 18:00 hours to 22:00 hours) only, so long as their scheduling is restricted to the peak hours;
- (ii) The Normative annual plant load factor (NAPLF) for allowing the incentive to the above generating stations of KSEB Limited shall be 85%;
- (iii) The Commission may based on a petition filed by the generator/ generating station consider revision in the gross station heat rate, in case the loading of such generating station/ unit is below the minimum threshold level;

- (iv) The Commission may based on a petition filed by the generator/ generating station revise the NAPAF, Gross station heat rate and Auxiliary Energy Consumption for the above Generating Stations, in the case of Renovation, Modernization and/or Uprating of the above stations.
- (2) The norms for operation of other new thermal generating stations shall be decided by the Commission on case to case basis based on a petition filed by the generator/ generating station.
- (3) The Normative annual plant load factor (NAPLF) for allowing incentive to other new thermal generating stations shall be determined by the Commission on case to case basis based on a petition filed by the generator/ generating station.
- (4) The Normative **Gross Station Heat Rate (GSHR)** for new gas based/ liquid fuel based generating stations achieving the commercial operation on or after the first day of April, 2022, shall be:

= **1.05 x Design Heat Rate** of the Unit/ Block, for Natural Gas and Re-gasified Liquefied Natural Gas (RLNG) (in kcal/ kWh); and

= **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% Maximum Continuous Rating (MCR) at the site ambient conditions; and the Design Heat Rate of a Block shall mean the guaranteed Heat Rate for a Block at 100% MCR at the site ambient conditions, with zero percent make up and design cooling water temperature/ back pressure.

- (5) The normative gross station heat rate of other thermal generating stations shall be determined by the Commission on case to case basis based on a petition filed by the generator/ generating station.
- (6) The normative Auxiliary Energy Consumption for Gas turbine/ Combined cycle generating stations shall be; 2.75% for Combined cycle plant and 1.0% for Open cycle Plant:

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

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

- (7) The normative auxiliary consumption for other thermal generating stations shall be determined by the Commission on case to case basis based on a petition filed by the generator/ generating station.

43. Components of the tariff. –

- (1) The tariff for sale of electricity from a hydroelectric generating station shall comprise of two parts, namely; fixed charge and energy charge as detailed below:
 - (i) The fixed charge of a hydro electric generating station shall be computed on annual basis, based on the norms specified under these Regulations and recovered on monthly basis (inclusive of incentive). The fixed charge shall be payable by the respective beneficiaries, in proportion to their respective share of allocation in the total saleable capacity of the generating station;
 - (ii) The Energy charge of a hydro electric generating station shall be payable by the beneficiaries, in proportion to the energy availed by them;
- (2) The tariff for sale of electricity from a liquid fuel or gaseous fuel based thermal generating station shall comprise of two parts, namely; fixed charge and energy charge as detailed below:
 - (i) The annual fixed charge of a liquid fuel or gaseous fuel based thermal generating station shall be computed on annual basis, based on the norms specified under these Regulations and recovered on monthly basis (inclusive of incentive). The fixed charge shall be payable by the respective beneficiaries, in proportion to their respective share of allocation in the total saleable capacity of the generating station;
 - (ii) The energy charge of a liquid fuel or gaseous fuel based thermal generating station shall be computed based on the norms specified under these Regulations and shall be payable by the beneficiaries in proportion to the energy availed by them.
- (3) Notwithstanding anything contained in this Regulation, annual fixed charges of the generation business of KSEB Ltd shall be on a composite basis for all the generating stations together based on the actual NAPFM; and consists of fixed charges only. There shall be no energy charges payable for the hydro electric stations.
- (4) The energy charges relating to the liquid fuel based thermal stations of the generation business of KSEB Ltd shall be as provided in these Regulations.
- (5) In case the cumulative Plant Availability Factor for the Month (PAFM) in a year or the Plant Availability Factor for the Year (PAFY) is more than the NAPAF in a year, the recovery of total monthly fixed charges shall be limited to the Annual Fixed Charge (AFC) only. -

44. Annual Fixed Charges (AFC).–

The annual fixed charges of a hydroelectric generating station or of a liquid fuel or gaseous fuel based thermal generating station shall comprise of the following components:-

- (i) Operation & Maintenance expenses;
- (ii) Depreciation;
- (iii) Interest and Finance charges;
- (iv) Interest on working capital;
- (v) Return on equity capital;
- (vi) deficit or surplus, if any, on account of truing up of the accounts for previous years as approved by the Commission, for recovery or adjustment through tariff:

Provided that the non-tariff income and other income, if any, shall be reduced while computing the annual fixed charges:

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

45. Operation and Maintenance expenses of Generators. –

- (1) Existing generating stations of the generation business of KSEB Limited, shall be allowed to recover operation and maintenance expenses for each financial year of the Control Period, as per the norms specified in *Annexure 7* to these Regulations:

Provided that in the case of one time maintenance of special nature, not in the form of routine repair and maintenance, if any, is required and is undertaken for the generating stations/ unit, expenses for such maintenance may be allowed by the Commission after prudence check considering the details and justification furnished by the Generating business/ company for incurring such an expenditure to the satisfaction of the Commission.

- (2) The generation business of KSEB Limited shall based on a petition filed by the generator/ generating station and subject to prudence check by the Commission, be allowed to recover, in addition to the above specified normative operation and maintenance expenses, the annual pension contribution payable by KSEB Limited to the Master Trust, based on actuarial valuation in respect of the personnel allocated to the generation business of KSEB Limited. KSEB Limited shall ensure that such amounts are deposited in a separate account of the Master Trust, shall not be utilized for working capital or on other such expenditure and proof of depositing such allocated amounts into the separate account shall be filed with the Commission within 90 days of the date of such Order.
- (3) In the case of new generating stations, the generating company shall be allowed to recover during the Control Period, the operation and maintenance expenses as specified hereunder,-
 - (i) the operation and maintenance expenses in the first year of operation shall be four percent of the original project cost (excluding cost of rehabilitation and resettlement works); and

- (ii) the operation and maintenance expenses for each subsequent financial year of the Control Period shall be determined using the escalation rate arrived at in *Annexure 7*, on the operation and maintenance expenses for the first year.

46. Other Income. –

- (1) The amount of other income of the generation business/ company as approved by the Commission shall be deducted from the annual fixed charges while determining the annual fixed charges of the generation business/ company.
- (2) The indicative list of items to be considered as 'other income' are as specified hereunder:-
 - (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;
 - (xvi) interest income earned from security deposits;
 - (xvii) normative interest income calculated based on accumulated regulatory surplus;
 - (xviii) Any other income.
- (3) The generation business/ company shall file full details of its forecast of non-tariff income and other income to the Commission along with its petition for determination of tariff.
- (4) The interest earned from investments made out of return on equity by the generation business/ company shall not be included in other income.

47. Recovery of fixed/capacity charge and energy charge for Hydro-electric Generating Station. –

- (1) The Annual Fixed Charges of a Hydro Generating Station shall be computed on annual basis, based on the norms specified under these Regulations. It shall be recovered on a monthly basis under Capacity Charge (inclusive of incentive) and Energy Charge, which shall be payable by the beneficiaries in proportion to their respective share in the capacity of the Generating Station. In addition to the Annual Fixed Charges to be recovered through Capacity Charge and Energy Charge, the Lease Rent and Water Royalty, if any, shall be payable by the

beneficiaries in proportion to their respective share in the capacity of the Generating Station on monthly basis.

- (2) In the case of storage and pondage type hydroelectric generating stations; 50% of the **annual fixed charges**, inclusive of incentive, payable for a calendar month shall be:-

$$[AFC \times 0.5 \times NDM] \div [NDY \times (PAFM \div NAPAF)] \quad (\text{in Rupees});$$

Where,

AFC = Annual fixed charges specified for the financial year, in Rupees;

NAPAF= Normative annual plant availability factor in percentage;

NDM = Number of days in the month;

NDY = Number of days in the financial year;

PAFM = Plant availability factor achieved, as certified by SLDC during the month, in percentage.

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

$$PAFM = [10000 \times \sum_{i=1}^N DCi] \div [N \times IC \times (100 - AUX)]\%$$

Where,

AUX = Normative auxiliary consumption in percentage;

DCi = Declared capacity (in ex-bus MW) for the i^{th} day of the month which the station can deliver for at least three (3) hours, as certified by the SLDC, after the day is over;

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

N = Number of days in the month.

- (4) For the storage and pondage type hydro-electric generating stations, the balance 50% of the annual fixed charges shall be recovered in the form of energy charges. The energy charge for storage and pondage type hydro-electric 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.

- (5) The **Energy charge rate (ECR)** in rupees per kWh on ex-power plant basis, for storage and pondage type hydro-electric generating stations, shall be determined upto three decimal places based on the following formula:-

$$ECR = [AFC \times 0.5 \times 100] \div [DE \times (100 - AUX)]$$

Where, DE = Annual design energy of the hydro-electric generating station in kWh, subject to the provisions of sub-regulation (6) below;

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

- (6) In case the actual total energy generated by a storage and pondage type hydro-electric generating station during a financial 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 monthly basis on the approval of a petition filed by the generation business/ company:-

- (i) In case the energy shortfall occurs within ten financial years from the date of commercial operation of a generating station:

The energy charge rate (ECR) for the financial year following the financial year of energy shortfall shall be computed based on the formula specified in sub-regulation (5) above, with the modification that the design energy shall be considered as equal to the actual energy generated during the financial year of the shortfall, till the shortfall in energy charge of the previous financial year has been made up, after which normal energy charge rate (ECR) shall be applicable:

Provided that in case the actual generation from a hydro-electric generating station is less than the design energy for a continuous period of four financial years on account of hydrology factor, the generating station may approach Central Electricity Authority (CEA) or the State Government, as the case may be, with relevant hydrology data for revision of design energy of the station.

- (ii) In case the energy shortfall occurs after ten financial years from the date of commercial operation of a generating station:

If the specified annual design energy for the station is DE kWh and the actual energy generated during the concerned (first) and the following (second) financial years is A1 and A2 kWh, respectively with, A1 being less than DE, then, the design energy to be considered in the formula in sub-regulation (5) of this Regulation for calculating the energy charge rate (ECR) for the third financial year shall be moderated as $(A1 + A2 - DE)$ kWh, subject to a maximum of DE kWh and a minimum of A1 kWh.

- (iii) Actual energy generated (e.g. A1, A2) shall be arrived at by multiplying the net metered energy sent out from the station by $\{100 \div (100 - AUX)\}$.

- (iv) In case the energy charge rate (ECR) for a storage and pondage type hydro-electric generating station, computed as per sub regulation (5) above exceeds one hundred paise per kWh and the actual saleable energy in a financial year exceeds $\{ DE \times (100 - AUX) \div 100 \}$ kWh, the energy charge for the energy in excess of the above shall be billed at one hundred paise per kWh only:

Provided that in a financial year following a financial 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 one hundred paise per kWh after the energy charge shortfall of the previous financial year has been made up.

- (7) The State Load Despatch Centre shall finalize the schedules for the hydro-electric generating stations, in consultation with the beneficiaries, for optimal utilization of all the energy declared to be available, which shall be scheduled for all the beneficiaries in proportion to their respective allocation of capacity of 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 financial year, validating the PAFM during the financial year, to the generation business/ company.
- (9) The energy charge for run of the river type hydro-electric 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-electric generating stations, shall be determined upto three decimal places based on the following formula:-

$$ECR = AFC \div DE;$$

Where, DE= annual design energy of the hydro-electric generating station in kWh;
AFC = Annual fixed charges specified for the financial year, in Rupees.

- (11) In case the energy charge rate (ECR) for run of the river type hydroelectric generating station, computed as per sub-regulation (10) above exceeds one hundred paise per kWh and the actual saleable energy in a financial year exceeds, $\{DE \times (100 - AUX) \div 100\}$ kWh, the energy charge for the energy in excess of the above shall be billed at one hundred paise per kWh only.

48. Computation of fixed/capacity charge and energy charge for thermal generating stations,-

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

$$CC_1 = [(AFC \div 12) \times (PAF_1 \div NAPAF), \text{ subject to ceiling of } (AFC \div 12)];$$

$$CC_2 = [(AFC \div 6) \times (PAF_2 \div NAPAF), \text{ subject to ceiling of } (AFC \div 6)] - CC_1;$$

$$CC_3 = [(AFC \div 4) \times (PAF_3 \div NAPAF), \text{ subject to ceiling of } (AFC \div 4)] - (CC_1 + CC_2);$$

$$CC_4 = [(AFC \div 3) \times (PAF_4 \div NAPAF), \text{ subject to ceiling of } (AFC \div 3)] - \sum_1^3 CC;$$

$$CC_5 = [(AFC \times \frac{5}{12}) \times (PAF_5 \div NAPAF), \text{ subject to ceiling of } (AFC \times \frac{5}{12})] - \sum_1^4 CC;$$

$$CC_6 = [(AFC \div 2) \times (PAF_6 \div NAPAF), \text{ subject to ceiling of } (AFC \div 2)] - \sum_1^5 CC;$$

$$CC_7 = [(AFC \times \frac{7}{12}) \times (PAF_7 \div NAPAF), \text{ subject to ceiling of } (AFC \times \frac{7}{12})] - \sum_1^6 CC;$$

$$CC_8 = [(AFC \times \frac{2}{3}) \times (PAF_8 \div NAPAF), \text{ subject to ceiling of } (AFC \times \frac{2}{3})] - \sum_1^7 CC;$$

$$CC_9 = [(AFC \times \frac{3}{4}) \times (PAF_9 \div NAPAF), \text{ subject to ceiling of } (AFC \times \frac{3}{4})] - \sum_1^8 CC;$$

$$CC_{10} = [(AFC \times \frac{5}{6}) \times (PAF_{10} \div NAPAF), \text{ subject to ceiling of } (AFC \times \frac{5}{6})] - \sum_1^9 CC;$$

$$CC_{11} = [(AFC \times \frac{11}{12}) \times (PAF_{11} \div NAPAF), \text{ subject to ceiling of } (AFC \times \frac{11}{12})] - \sum_1^{10} CC;$$

$$CC_{12} = [AFC \times (PAF_Y \div NAPAF), \text{ subject to ceiling of } AFC] - \sum_1^{11} CC;$$

Where,

AFC = annual fixed cost for the financial year, in Rupees;

NAPAF = normative annual plant availability factor in percentage;

PAF_n = % plant availability factor achieved upto the end of the nth month;

PAFY = percent plant availability factor achieved during the financial year;

CC₁ to CC₁₂ are the fixed charges of first to twelfth months respectively;

$\sum_1^N CC$ are the cumulative fixed charges from the first to the Nth months.

Provided that in the case of generating station or generating unit thereof under shutdown due to renovation, modernization and/or uprating of the generation business/ company, they shall be allowed to recover part of the annual fixed cost (AFC), which shall include O&M expenses and interest on loan only:

Provided further that, the repairs and maintenance charges in respect of the unit under renovation, modernization and/or uprating shall be reduced, while computing the O&M expenses as specified in the first proviso.

- (2) The Availability (PAFM upto the end of a particular month and PAFY) in relation to a thermal generating station for any period means the average of the daily average declared capacities as certified by State Load Despatch Centre 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:

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

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 financial 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 the case of a change in IC during the concerned period, its average value shall be taken.

- (3) The 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 Note (ii) to sub Regulation (1) and sub Regulation (3) of Regulation 42.

- (4) The energy charge shall cover the cost of landed fuel and shall be computed as follows:-

Energy charges 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) = energy charge rate in Rs/ kWh x energy (ex-bus) for the month in kWh corresponding to actual generation.

- (5) The Energy charge rate (ECR) in Rs/ kWh shall be equal to the cost of normative quantity of fuel for delivering one kWh of electricity (ex-bus) and shall be computed as under:-

$$\text{ECR} = [\text{GSHR} \times \text{LPPF} \times 100] \div [\text{CVPF} \times (100 - \text{AUX})];$$

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 the 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 liquid fuel based and gas based stations.

- (6) Any variation in price and/ or gross calorific value of the liquid fuel or gas vis-a- vis the approved values shall be adjusted on month to month basis. This shall be based on the average gross calorific value of the liquid fuel consumed; which shall be calculated based on the fuel or gas in stock, quantity received, closing stock and the weighted average landed cost incurred for the procurement of liquid fuel or gas for a power station. In its bills, the generation business/ company shall indicate the energy charge rate at base price of the primary fuel approved by the Commission and the fuel surcharge to it separately. The generation business/ company should file the computation of fuel surcharge to the Commission on quarterly basis for approval of adjustment of energy charge rate.

49. Demonstration of the declared capacity. –

- (1) The generation business/ company shall demonstrate the declared capacity of its generating stations as and when asked to do so by the State Load Despatch Centre.

- (2) In case, the generation business/ company fails to demonstrate the declared capacity as and when required by the State Load Despatch Centre, the capacity charges due to the generation business/ company shall be reduced as specified in sub-regulations (3) & (4) below.
- (3) The quantum of reduction in the capacity charges for the first wrong declaration for the duration of a time block in a day shall be the charges corresponding to two days capacity charges.
- (4) For the second wrong declaration, the quantum of reduction in capacity charges shall be equivalent to the capacity charges for four days and for subsequent wrong declarations, the quantum of reduction in the capacity charges shall be increased in geometrical progression.
- (5) The operating logbooks of the generating station shall contain the record of operation and maintenance of the machine, reservoir level, operation of spillway gate and such other relevant details as required and applicable; and they shall be made available for scrutiny, as and when required by the State Load Despatch Centre.

50. Tariff for sale of infirm power.-

- (1) The tariff for sale of infirm power from the hydro-electric generating station to the distribution business/ licensee shall be equivalent to the energy charge rate for the first financial year and revenue recovered from sale of infirm power shall be deducted from the capital cost of that unit/ station.
- (2) The tariff for sale of infirm power from a thermal generating station to the distribution business/ licensee shall be fixed by the Commission in such a way that the fuel cost for generating the infirm power is recovered.

51. Billing and payment of charges. –

- (1) Billing and payment of charges shall be done on a monthly basis in the following manner:-
 - (i) 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 financial year;
 - (ii) 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 shares or allocations in the installed capacity of a generating station;
 - (iii) For payment received within 5 days of issuance of invoice by the generation business/ company, the generation business/ company and distribution business/ licensee may mutually agree to a maximum rebate of 1.50 percent of the invoice amount;
 - (iv) If the payments are made on any day after 5 days and within a period of 30 days of issuance of invoice, the generating business/ company and distribution licensee may mutually agree to a maximum rebate of 1.00 percent of the invoice amount;

(v) In case the payment of invoice is delayed beyond a period of forty-five days from the date of billing, a late payment surcharge at the rate of 1.50 percent per month shall be levied by the generation business/ company:

Provided that in the case of agreements for purchase of power entered into before the first day of April, 2022, the billing and payment of charges shall be in accordance with the terms and conditions of such agreement.

(2) Deviation Charges.-

Variations between the actual net injection and the scheduled net injection for the generating stations, and variations between the actual net drawal and scheduled net drawal by the beneficiaries shall be treated as their respective deviations, and charges for such deviations shall be as decided by the Commission from time to time.

CHAPTER VI
TRANSMISSION

52. Applicability.-

- (1) The Regulations specified in this Chapter shall apply to the determination of tariff for access and use of the intra state transmission system of the transmission business/ licensee.
- (2) The Commission shall be guided by the terms and conditions contained in this Chapter in the determination of rates, charges and terms and conditions for the use of intervening transmission facilities, pursuant to a petition made by a Transmission licensee under the proviso to Section 36 (1) of the Act.

53. Capital cost.–

The capital costs from the date of commencement of each capital project till the date of its commercial operation, as approved by the Commission after prudence check, shall be the Original Capital Cost of such project for the purpose of determination of tariff.

54. Capital investment plan. –

- (1) The transmission business/ licensee shall, along with the petition for Aggregate Revenue Requirements for the Control Period, file to the Commission for its approval a detailed capital investment plan. Detailed Project Report (DPR) of each of the proposed projects, its financing plan, the physical targets sought to be achieved with relevant dates and the cost benefit analysis justifying the investment. Such investments may be undertaken for strengthening and augmenting the intra-State transmission system for meeting the requirement of power evacuation, load growth, reduction in transmission losses, improvement in the quality of supply, reliability, metering etc. for the Control Period, in accordance with the 'Guidelines for approval of Capital Investment Schemes' specified in *Annexure 4* to these Regulations.
- (2) The Capital Investment Plan of the transmission business/ licensee shall be consistent with the Transmission System Plan for the Intra-State transmission system developed by the STU, and shall also take into account the Transmission System Plan for the interstate transmission system proposed or being developed by the CTU:

Provided that any capital expenditure proposed to be incurred by the Transmission Licensee based on the specific requirement of a Generating Company or Distribution Licensee shall be substantiated with the necessary documentary evidence in the form of a petition and approval for the same shall be sought from the Commission.

- (3) The transmission business/ licensee shall be required to optimize the investments to enhance efficiency and productivity.

- (4) The Capital Investment Plan shall be accompanied by such information, particulars and documents as may be required; including but not limited to the information such as the number of bays, name, configuration and location of the grid substations, substation capacity (MVA), transmission line length (circuit kilometres); with full justification for the proposed investments. It shall also include alternatives, if any considered, cost-benefit analysis and other aspects that may have a bearing on the transmission charges. It shall also substantiate the need, and justify the proposed investments based on load flow studies. The investment plan shall also include the capitalization schedule and the financing plan.
- (5) The Commission may approve the Capital Investment Plan of the transmission business/ licensee, with appropriate modifications, if required or reject the same, based on the prudence check:

Provided that the Commission shall provide a reasonable opportunity to the transmission licensee to present the case, before rejecting any proposal for capital investment;
- (6) The approved cost of projects which have achieved COD in a given financial year and included as a part of the approved investment plan only, shall be considered for its revenue requirement for the said financial year.

55. Prudence check of Capital cost.–

- (1) The principles specified in the following sub-regulations shall be some of the criteria adopted for prudence check of capital cost of the projects,-
- (2) Generally, project-based capital costs shall form the basis for the Commission's, prudence check. This may include but not limited to scrutiny of the capital expenditure, financing plan, project completion schedule and interest during construction etc.; for its reasonableness, use of efficient technology, cost and time over-run, competitive bidding for procurement and such other matters, as may be considered appropriate by the Commission for determination of tariff.
- (3) While carrying out the prudence check of the capital cost of transmission projects, the Commission shall also take into consideration the benchmark norms specified by the Central Electricity Regulatory Commission from time to time, as the ceiling norms.
- (4) In cases where benchmark norms have been specified and the capital cost proposed by the transmission business/ licensee exceeds such norms, the transmission business/ licensee shall file justification for exceeding the benchmark capital cost with all the relevant documents, to the satisfaction of the Commission.
- (5) The Commission may at its discretion engage an independent agency or an expert to scrutinize the capital cost of any transmission project; and in such cases, the capital cost vetted by such agency or expert may be considered by the Commission, while determining the tariff for the transmission project:

Provided that the Commission shall hear the concerned applicant and other stakeholders, before taking a final decision on the report of such agency or expert.

56. Operational Norms.–

- (1) Target availability for full recovery of annual transmission charges for alternating current (AC) system shall be 98 per cent:

Provided that the recovery of annual transmission charges below the level of target availability shall be only on pro-rata basis and that no transmission charges shall be payable at zero availability:

Provided further that the availability shall be calculated in accordance with the procedure specified in the *Annexure 2* to these Regulations and shall be certified by the State Load Despatch Centre:

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

$$\text{Incentive} = [(ARR) \times (AAA - TA)] \div [TA];$$

Where,

ARR is the Annual Revenue Requirement;

AAA is the Annual Availability Achieved; and

TA is the Target Availability.

Provided that no incentive shall be payable for the availability above 99.75%;

- (3) The computation of reduction in transmission charges as per the first proviso under sub regulation (1) above and the computation of incentive as per sub regulation (2) above shall be undertaken during the truing up of the accounts for each financial year.

57. Components of the Aggregate Revenue Requirement.–

- (1) The Aggregate Revenue Requirement shall comprise of the following items of expenditure:-
 - (i) operation and maintenance expenses;
 - (ii) interest and finance-charges;
 - (iii) depreciation;
 - (iv) interest on working capital and deposits from users of the transmission system, if any;
 - (v) contribution to contingency reserves;
 - (vi) return on Equity; and

- (vii) deficit or surplus on account of truing up of accounts for previous years as approved by the Commission for recovery through tariff.
- (2) The following items, if any, shall be deducted from the gross amount of Aggregate Revenue Requirement computed as specified above:-
- (i) non-tariff income;
 - (ii) other income
 - (iii) revenue from open access charges from transmission customers, if not already considered; and
 - (iv) Income from other business, to the extent specified in these Regulations.
- (3) Depreciation, Interest on Loan Capital, Interest on working capital and deposits from Transmission System Users, Contribution to Contingency Reserves, Return on Equity, and Income Tax for Transmission Licensees shall be allowed in accordance with the provisions specified in these Regulations.

58. Operation and Maintenance expenses.–

- (1) The transmission business/ licensee shall be allowed to recover the operation and maintenance expenses based on the number of 'Bays' and 'Circuit km of lines'; as per the norms specified in *Annexure 7* to these Regulations, for each financial year of the Control Period.

Explanation:

- (i) For the purpose of deriving the normative O&M expenses, 'Bay' shall mean a set of accessories that are required to connect an electrical equipment at 66 kV and above voltage level; such as transmission line, bus section breakers, potential transformers, power transformers, capacitors and transfer breakers, and the feeders emanating from the bus at the sub-station of the transmission business/ licensee.
 - (ii) For the purpose of deriving the normative O&M expenses, 'circuit km' means the length in circuit kilometres of the transmission lines at voltages of and above 66 kV.
 - (iii) The O&M expenses for any year of the Control Period shall be allowed by multiplying the O&M norms for that year with the actual number of bays and transmission line length in circuit km for the previous year and at 50 per cent of the circuit kilometre of transmission lines and number of Bays in the substation of the Transmission Licensee added during the year. i.e., the O&M expenses for FY 2022-23 shall be allowed by multiplying the O&M norms for FY 2022-23 with the actual number of bays and transmission line length available in circuit km for FY 2021-22 and 50 per cent of the circuit kilometres of the transmission lines and number of Bays added during the FY 2022-23.
- (2) In case, one time maintenance of special nature not in the form of routine repair and maintenance, if any, is required and is undertaken for the transmission system, expenses for such maintenance may be allowed by the Commission after prudence check; considering the details and justification furnished by the

Transmission business/ licensee for incurring such an expenditure to the satisfaction of the Commission.

- (3) Transmission Licensee may undertake Operational improvement (Opex) schemes for system automation, introduction of new technology and IT implementation etc., and such expenses may be allowed over and above the normative O&M Expenses, subject to their inclusion and approval in the Capital Investment Plan and prudence check by the Commission:

Provided that the Transmission Licensee shall file detailed justification, cost benefit analysis of such schemes as against Capex schemes, and savings in O&M expenses, if any.

- (4) The transmission business of KSEB Limited shall be allowed to recover the annual pension contribution to the Master Trust, based on actuarial valuation, in respect of the personnel allocated to the transmission business of KSEB Limited, in addition to the normative operation and maintenance expenses specified in sub regulation (1) above.

59. Contribution to contingency reserves, investments and its utilization.–

- (1) Where the transmission business/ licensee has made a provision to the contingency reserve, a sum not more than 0.25 percent (%) of the original cost of the fixed assets, shall be allowed annually towards such provision in the calculation of Aggregate Revenue Requirement:

Provided that the transmission licensee shall open a separate account and deposit all such sums approved by the Commission during the truing up of the transmission licensee's accounts:

Provided further that where the cumulative amount of such contingency reserve exceeds five percent of the original cost of fixed assets, no such appropriation shall be allowed:

Provided also that the amount so appropriated shall be invested in securities authorized under the Indian Trust Act, 1882 (Act 2 of 1882), within a period of six months of the close of the financial year and a statement of such investment filed before the Commission immediately thereafter:

- (2) The contingency reserve shall not be drawn without the prior approval of the Commission during the term of the licence except to meet the following charges:-
 - (i) Expenses or loss of profit arising out of accidents, strikes or circumstances which the transmission business/ licensee could not have prevented;
 - (ii) Unanticipated and unavoidable expenses on replacement or removal of plant or works other than expenses required for normal maintenance or renewal;
 - (iii) Compensation payable under any law for the time being in force and for which no other provision is made:

Provided that any such drawal from the contingency reserve shall be computed after making due adjustments for any other amount that may have been received by the transmission business/ licensee as part of insurance cover from any other sources.

60. Other income.–

- (1) The amount of non-Tariff income relating to the Transmission Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the Annual Transmission Charges of the Transmission Licensee.
- (2) The indicative list of items to be considered as Other income shall include:
 - (i) interest on staff loans and advances;
 - (ii) income from statutory investments;
 - (iii) income from rent of land or buildings;
 - (iv) income from sale of scrap;
 - (v) income from staff welfare activities;
 - (vi) rental from staff quarters;
 - (vii) excess found on physical verification;
 - (viii) interest on investments, fixed and call deposits and bank balances;
 - (ix) interest on advances to suppliers/contractors;
 - (x) income from hire charges from contractors and others;
 - (xi) income due to right of way granted for laying fibre optic cables/ coaxial cables on transmission system;
 - (xii) income from advertisements etc.;
 - (xiii) miscellaneous receipts;
 - (xiv) interest on delayed or deferred payment on bills;
 - (xv) interest income earned from security deposits;
 - (xvi) normative interest income calculated based on accumulated regulatory surplus;
 - (xvii) Any other revenue.
- (3) The transmission business/ licensee shall file all details of its forecast of non-tariff income and other income to the Commission along with its petition for determination of tariff.
- (4) The interest earned from investments made out of return on equity of the transmission business/ licensee shall not be included in other income.

61. Income from other business.–

- (1) Where the transmission business/ licensee has as per Section 41 of the Act engaged in any other business for optimum utilization of the assets of its electricity business, an amount equal to one-half of the revenue from such other business, after deduction of all the direct and indirect costs attributed to such other business, shall be deducted from the Aggregate Revenue Requirement of the transmission business/ licensee.

- (2) Where the sum total of the direct and indirect costs of such other business, exceeds the revenue from such other business, the transmission licensee shall file a petition before the Commission clearly indicating the nature of business, its income and its sources, expenses, reasons for shortfall along with measures taken/ proposed to be taken to overcome the situation and seeking directions from the Commission in this regard. No amount however shall be allowed to be added to the Aggregate Revenue Requirement of the transmission business/ licensee on account of such other business.
- (3) The transmission business/ licensee shall follow a reasonable basis for allocation of all the joint and common costs between the transmission business and the other business, and shall file the allocation statement with justification to the Commission, duly audited and certified by the statutory auditors, along with its petition for determination of tariff.

62. Determination of Intra state transmission charges.-

- (1) The transmission charges for access to and use of the transmission system of the transmission business/ licensee shall comprise of the transmission system access charges and the transmission charges.
- (2) The annual transmission charges shall be determined by the Commission in such a way that the Aggregate Revenue Requirement of the transmission business/ licensee for the financial year, as approved by the Commission after prudence check, is recovered.
- (3) The annual transmission charges of the transmission business/ licensee shall be determined by the Commission on the basis of a petition made by the transmission business/ licensee, for determination of the tariff, in accordance with *Chapter III* of these Regulations.
- (4) Any person who is eligible to apply for access to the transmission system of the transmission business/ licensee shall be provided such access without any discrimination and in accordance with the Kerala State Electricity Regulatory Commission (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.

63. 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 the 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:-

$$\mathbf{ATC_n = [Transmission\ ARR\ x\ CC_n] \div SCC;}$$

Where,-

- ATC_n = Annual transmission charges payable by the nth long-term user or medium-term user of the transmission system;
- Transmission ARR = Annual Aggregate Revenue Requirement of the transmission business of KSEB Limited, determined in accordance with *Regulation 57* of these Regulations;
- CC_n = Capacity contracted in MW by the nth long-term user or medium-term user of the transmission system;
- SCC = sum of the capacities contracted in MW by all the 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 user or medium-term user of the transmission system and shall be collected by the transmission business of KSEB Limited in its capacity as the State Transmission Utility (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:-

$$\mathbf{TC_n = (Transmission\ ARR / SCC) \div 365;}$$

Where,-

- TC (Rs/ MW/ day) = transmission charges payable per day 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 57* of these Regulations;
- SCC = sum of the capacities contracted in MW by all the long-term users and medium-term users of the transmission system.

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

$$\mathbf{TC\ (Rs/kWh) = Transmission\ ARR \div Total\ units\ in\ kWh,}\ \text{estimated to be wheeled;}$$

Where,-

- TC (Rs/ kWh) = Transmission charges payable in the 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 57* of these Regulations;
- Total units wheeled = total energy units in kWh, estimated to be wheeled through the intra-state transmission system during the financial year.

64. Transmission Losses.-

- (1) The energy losses in the intra-State transmission system, as determined by the State Load Despatch Centre and approved by the Commission, shall be

considered as Transmission Losses and borne by the Transmission System Users in proportion to their usage of the intra-State transmission system.

- (2) The quantum of energy consumed by the auxiliary equipments of a transmission sub-station and the station transformer losses within the sub-station shall not be accounted for, under the Transmission Losses.
- (3) The energy consumed for supply of power by the transmission sub-station to the associated offices of the Licensee, its housing colony and other facilities, and for construction works at the sub-station, shall not be considered as energy consumed by the auxiliary equipments of a transmission sub-station.

65. Reactive energy charges, incentives and disincentives.–

- (1) A generating station shall, as and when directed by the State Load Despatch Centre, inject the reactive energy into the grid on the basis of the capability of the generating machine to supply reactive power.
- (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:-
 - (i) The person responsible for reactive energy compensation shall be the distribution licensee/ Open Access user directly connected to the State transmission network;
 - (ii) The maximum reactive energy drawal at each interchange point shall be limited, corresponding to the power factor of 0.95;
 - (iii) The incentive/ disincentive for maintaining the reactive energy balance in the transmission system shall be as specified below,-
 - a) If the voltage at the interchange point (V_p) exceeds the nominal voltage (V_n) by more than three percent, the incentive payable shall be at the rate of ten paise per RkVAh for the additional drawal;
 - b) If the voltage at the interchange point (V_p) fall short of the nominal voltage (V_n) by more than three percent, the disincentive payable shall be at the rate of ten paise per RkVAh for the additional drawal;
 - c) If the voltage at the interchange point (V_p) is between ninety seven percent and one hundred and three percent of the nominal voltage (V_n), no incentive or disincentive shall be payable.
- (3) The above incentives/ disincentives shall be made applicable, only after adequate metering, energy accounting and billing infrastructure covering all the interchange points on the transmission system are put in place by the State Transmission Utility (STU) and the concerned persons.
- (4) The Commission may alter or modify the above incentive/ disincentive scheme as and when required.

CHAPTER – VII

STATE LOAD DESPATCH CENTRE CHARGES

66. Aggregate revenue requirement of the State Load Despatch Centre (SLDC).–

- (1) The Commission shall, after prudence check, determine the Aggregate Revenue Requirement of the State Load Despatch Centre, which shall comprise of the following items of expenditure:-
 - (i) Operation & maintenance expenses;
 - (ii) Interest on working capital;
 - (iii) RLDC fees and SRPC charges;
 - (iv) Depreciation;
 - (v) Interest and finance charges; and
 - (vi) Return on equity

Provided that the income receipts from Open Access charges and Non-Tariff income shall be deducted from the ARR amount.

- (2) The State Load Despatch Centre shall file separate audited accounts of its business:

Provided that, in case separate accounts are not prepared for SLDC, for the first two years of the Control Period, the Commission may approve the Aggregate Revenue Requirement of State Load Despatch Centre, as a portion of the approved Aggregate Revenue Requirement of the transmission business of KSEB Limited, based on the proposal filed by SBU-T for the said period of the Control Period.

- (3) The Commission may adopt the general and financial principles specified in these Regulations for the determination of Aggregate Revenue Requirement of the State Load Despatch Centre.
- (4) The Operation and Maintenance expenses shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/ deducting the share of efficiency gains/ losses, for the three years ending March 31, 2020, excluding the abnormal Operation and Maintenance expenses, if any, subject to prudence check by the Commission:

Provided that in the absence of separate accounts for SLDC, the Commission may based on a petition consider allocation of certain percentage of the Operation and Maintenance expense of SBU-T towards Operation and Maintenance expense of SLDC.

- (5) The SLDC may after prior approval of the Commission undertake Operating Expenses (Opex) schemes for system automation, new technology and IT implementation etc., and such expenses may be allowed over and above the normative O&M expenses, subject to prudence check by the Commission:

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

- (6) The RLDC Fees and Charges payable by the SLDC in accordance with the relevant Orders issued by the Central Electricity Regulatory Commission from time to time shall be allowed to be recovered by the SLDC through the Fees and Charges as approved by the Commission. The SLDC shall have to produce documentary proof towards payment of such Charges at the time of Mid-Term Review or Truing up:

Provided that any variation between the approved RLDC Fees and Charges and SRPC Charges and that actually paid by the SLDC shall be considered during the true-up as per the audited accounts, subject to prudence check and any other factor considered appropriate by the Commission.

- (7) The amount of Non-Tariff Income relating to the SLDC as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the Fees and Charges of the SLDC:

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

- (8) Prior period income/ expenses shall be allowed by the Commission at the time of truing up based on audited accounts, on a case to case basis, if the income/ expenses in that prior period have been allowed on actual basis, subject to prudence check.
- (9) Penalties and compensation, if any, paid by the SLDC on the orders of the Commission and Courts to any party for failure to meet its obligations or for damages, shall not be allowed to be recovered through the Aggregate Revenue Requirement:

Provided that the SLDC shall maintain separate details of such penalties and compensation, paid by the SLDC, if any, and shall file the same to the Commission along with the Petitions to be filed under these Regulations.

- (10) The SLDC charges shall be levied from the Transmission business/ licensees, the Generating companies and the users in such a way that, the above Aggregate Revenue Requirement as approved by the Commission for the financial year is recovered.
- (11) The State Load Despatch Centre charges shall be recovered on a monthly basis.

67. Capital Investment plan of SLDC.-

- (1) The SLDC shall file a detailed capital investment plan, financing plan and physical targets for each year of the Control Period; based on their assessment

of the operational requirements with recommendations of various Committees constituted for looking into the matters related to strengthening and ring fencing of the State Load Despatch Centres by the Ministry of Power, Government of India or any such other statutory authorities, to the Commission for approval, as part of the Multi-Year Aggregate Revenue Requirement for the entire Control Period.

- (2) The Capital Investment Plan shall be a Least Cost Plan for undertaking investments and shall cover all the capital expenditure projects whose cost exceeds Rupees One crore or any other limit as may be stipulated by the Commission from time to time, and shall be in such form as may be stipulated by the Commission.
- (3) The Capital Investment Plan shall be accompanied by such information; particulars and documents as may be required, showing the need for the proposed investments, alternatives considered, cost/ benefit analysis and other aspects that may have a bearing on the SLDC Fees and Charges.
- (4) The Commission shall consider the Capital Investment Plan along with the Multi-Year Aggregate Revenue Requirement for the entire Control Period filed, taking into consideration the prudence of the proposed expenditure and the estimated impact on SLDC Fees and Charges.
- (5) The SLDC shall file, along with the Petition for determination of Aggregate Revenue Requirement or along with the Petition for Mid-term Performance Review, as the case may be, details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require for assessing the progress of the schemes.
- (6) The Commission may permit the SLDC to create and maintain a separate LDC Development Fund for such purposes and from such sources of income, as the Commission may consider appropriate, on a Petition filed by the SLDC.

68. Determination of Fees to be charged by SLDC.-

- (1) The SLDC shall recover the following Fees, as approved by the Commission, from time to time:-
 - (i) Registration or Connection Fees per connection from all the users connecting to the Intra-State Transmission System;
 - (ii) Scheduling Fees per day for intra-State short-term Open Access transactions;
 - (iii) Re-scheduling Fees for each revision in schedule after the finalization of schedules by the SLDC on a day-ahead basis or for non-submission of schedule as per the State Grid Code requirements;
 - (iv) Short-term Open Access Application Processing Fees; and
 - (v) Any other Fees approved by the Commission from time to time.

- (2) The revenue from such Fees shall be considered for adjustment of Annual Fixed Charges in subsequent years unless the same forms part of the LDC Development Fund.
- (3) The SLDC charges shall be levied from the Long-term Beneficiaries and the Medium-Term Open Access consumers (Transmission, Generation & Distribution) in such a way that the ARR of the SLDC for the financial year as approved by the Commission is recovered.
- (4) The SLDC shall raise monthly bill for SLDC Charges on every Long-term Beneficiary and Medium-Term Open Access consumer on the first working day of the month for the SLDC Charges of the preceding month.
- (5) The monthly bill for SLDC Charges shall be payable within thirty days of receipt of the bill by the Long-term Beneficiaries and the Medium Term Open Access consumers.

CHAPTER – VIII

DISTRIBUTION

69. Applicability.–

- (1) The Regulations contained in this Chapter shall apply to,-
 - (i) the determination of tariff for retail sale of electricity by the distribution business/ licensee to its consumers;
 - (ii) the determination of tariff payable for bulk supply by KSEB Limited to other distribution licensees in the State of Kerala; and
 - (iii) 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.
- (2) In the case of new distribution licensees and licensees who have not commenced operation as on the date of commencement of these Regulations, the Commission shall on a petition made before it, approve an interim tariff and thereafter the Commission shall decide the tariff based on the principles as per these Regulations and on the filing of such licensees.

70. Capital cost. –

- (1) The capital costs from the date of commencement of each capital project till the date of its commissioning, as approved by the Commission after prudence check, shall be the original capital cost of such project for the purpose of determination of tariff.
- (2) While approving the capital cost of a project, the Commission shall compare it with the originally approved capital, cost deviations, if any, reasons thereof etc. Increase in capital cost due to time and cost overruns for reasons other than force majeure or where the Commission in its opinion concludes that such instances could have been avoided by the distribution licensee through appropriate advance planning, timely interventions or through economy measures including disallowing avoidable costs. Such expenses shall not be allowed while computing the capital cost of a project.
- (3) The provisions of the Accounting Standard (Ind AS) as notified by Government of India, applicable to accounting of the fixed assets, shall apply, to the extent not inconsistent with these Regulations, in determining the original cost of the capital projects.

71. Capital investment plan. –

- (1) It is the primary responsibility of the distribution business/ licensee to ensure optimum utilization of the capital expenditure in its projects to enhance economy, efficiency and productivity and to meet the Performance Standards specified by the Commission.
- (2) The distribution business/ licensee shall, along with the petition for determination of aggregate revenue requirements for the Control Period, file to the Commission for its approval, a detailed yearly capital investment plan, financing plan and the physical targets for meeting the requirement of load growth, reduction in distribution losses, improvement in the quality of supply, reliability, metering, consumer services etc., in accordance with the 'Guidelines for Provisional Clearance of Capital Investment' specified in *Annexure 4* to these Regulations.
- (3) The Capital Investment Plan shall be accompanied by all such information, particulars and documents as may be required by the Commission to substantiate the need for the investment, justification of the proposed investments, project wise detailed Project Report, basis of estimate, alternate solutions considered, and shall also include the capitalization schedule and financing plan.
- (4) The Commission may approve the capital investment plan of the distribution business/ licensee, with appropriate modifications, if required, or reject the same:

Provided that the Commission shall afford to the distribution business/ licensee, a reasonable opportunity of being heard, before rejecting the proposal for approval of the Capital Investment Plan.
- (5) The costs corresponding to the capital investments which are capitalised as per the approved Capital Investment Plan of the distribution business/ licensee for a given financial year shall be considered for its revenue requirement.

72. Sales Forecast. –

- (1) The distribution business/ licensee shall file, along with the petition for approval of Aggregate Revenue Requirement and determination of tariff, a forecast of the expected demand and sale of electricity to different categories of consumers and to each consumption slab within each tariff category, in its area of supply for the Control Period.
- (2) Sale of electricity, if any, to electricity traders or other distribution licensees shall be separately indicated.
- (3) The Commission shall examine the forecasts for its reasonableness based on the proposed growth in number of consumers and proposed consumption per consumer, the demand for electricity in the preceding financial years, anticipated growth in the succeeding financial years and any other factor, which the Commission may consider relevant and thereafter approve the distribution

licensee's forecast of sale of electricity to the consumers, with such modifications as deemed appropriate.

73. Distribution Losses.-

- (1) The distribution business/ licensee shall,-
 - (i) carry out appropriate studies for the estimation of distribution losses, in order to set a realistic base line of the estimates of losses at different voltage levels and to segregate commercial and technical losses in the system;
 - (ii) file separate details of actual and anticipated losses at different voltages, while computing its total energy requirement;
 - (iii) file along with the petition for approval of Aggregate Revenue Requirement for the Control Period, the information on actual total distribution losses and voltage-wise distribution losses in the preceding five financial years and the estimates for each year of the Control Period and the basis on which such losses have been worked out;
 - (iv) propose the loss reduction targets for each financial year of the Control Period, along with absolute loss levels;
 - (v) Substantiate the proposed loss levels with necessary data from studies and their results.

- (2) The Commission may after due consideration approve the target of distribution loss reduction for each financial year of the Control Period considering the opening loss levels, filings of the distribution business/ licensee, investments made by the licensees which have a bearing on the distribution losses, submissions and objections raised by the stakeholders and the findings of the Commission.

Provided that the Commission may while truing up of accounts, if it considers appropriate consider the distribution loss reduction targets for the each year of the control period in a range of (+)/(-) 10% of the absolute loss reduction target set for any of the years of the control period.

Provided further that such reset targets shall not qualify for any reward/ penalty while truing up of accounts.

- (3) Any variation between the actual level of distribution losses and the approved level of distribution losses shall be dealt with, as part of the truing up of the respective financial year in the Control Period, in the following manner:-
 - (i) If the actual distribution loss is higher than the approved level of distribution loss for any particular financial year of the Control Period, then the quantum of power purchased corresponding to the excess distribution loss for that financial year, shall be disallowed at the average cost of power purchase for the respective financial year;
 - (ii) If the actual distribution loss is lower than the approved level of distribution loss for any particular financial year of the Control Period, then the savings

in power purchase cost corresponding to the difference in distribution loss for that financial year at the average cost of power purchase for the respective financial year, shall be shared between the distribution business/ licensee and its consumers in the ratio of 2:1;

- (iii) Export of power to other states, if any, and the revenue thereof shall be considered by the Commission appropriately, while determining the disallowance on account of excess distribution loss.

74. Power Procurement Plan.–

- (1) With the coming into effect of these Regulations, from 1st April 2022, the distribution licensee shall not purchase power from any new source (with the exception of short term purchase) without the formal approval of the Commission based on a petition filed by the distribution licensee.
- (2) The distribution business/ licensee shall prepare annual plans for procurement of power to meet the demand in its area of supply and file such plan to the Commission for its approval, along with the petition for approval of Aggregate Revenue Requirement for the Control Period:

Provided that the Power Procurement Plan filed by the distribution business/ licensee shall include details of long-term, medium-term and short term sources of power, as the case may be.

- (3) The Power Procurement Plan shall be consistent with the sales forecast in accordance with *Regulation 72* of these Regulations and shall be based on past data and reasonable and verifiable assumptions regarding the future.
- (4) The Power Procurement Plan of the distribution business/ licensee shall be based on the following:-
 - (i) quantitative forecast of the unrestricted demand for electricity within its area of supply, from each tariff category of the financial year;
 - (ii) 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 power purchase agreement, if any, or worked out from energy accounts of RLDC/ SLDC shall be considered;

- (iii) an estimate of the quantities of electricity supply from the approved sources of generation and power purchase;
- (iv) an estimate of availability of power to meet the base load and peak load requirement;

Provided that the estimate should be a monthly estimation of demand and supply, both in Mega-Watt (MW) and in Million units (MU);

- (v) standards to be maintained with regard to quality and reliability of the supply, in accordance with the Kerala State Electricity Regulatory Commission (Licensees' Standards of Performance) Regulations, 2015, as amended from time to time;
 - (vi) measures proposed to be implemented, with regards to energy conservation and energy efficiency;
 - (vii) minimum share of renewable energy purchase, as specified by the Commission;
 - (viii) the new sources of power generation, if any, including the augmentation of generation capacity and identified new sources of supply and procurement, based on the clauses (i) to (vii) above;
 - (ix) the forecast/ estimate contained in the power procurement plan shall be separately stated for peak and off-peak periods, in terms of quantity of the power to be procured (in millions of units of electricity) and the maximum demand (in MW / MVA);
 - (x) the forecasts/ estimates prepared for each month of the financial year;
 - (xi) proposed short-term power procurement plan; and
 - (xii) Merit order despatch.
- (5) The distribution business/ licensee shall file source wise cost estimates for power procurement along with the annual power procurement plan, which shall be based on the following principles and subject to the provision under *Regulation 77*:-
- (i) The cost of power proposed to be purchased from the generating companies and the cost of transmission shall be worked out based on the tariff determined or adopted by the appropriate Commission, as the case may be;
 - (ii) The cost of power proposed to be purchased from nuclear power stations of Nuclear Power Corporation of India Limited (NPCIL) shall be worked out on the basis of tariff notified by the Department of Atomic Energy, Government of India;
 - (iii) In the case of Nuclear Power Stations where COD is declared on or after 1st April 2022, the distribution licensee shall file a formal petition indicating the tariff and other terms and conditions along with the PPA and obtain approval of the Commission before drawal of power from such units;
 - (iv) Mere allocation of power from the Ministry of Power cannot be the basis for drawing power or entering into a PPA. All such allocations have to be formally filed before the Commission as a petition and shall include the quantum of power, its rate, other terms and conditions etc. Only after formal approval of the Commission is obtained, shall the distribution licensee draw any power from any new source.
 - (v) The estimates of the cost of short-term power purchase from traders, power exchange and other licensees shall be based on past trends;
 - (vi) Cost of power generated by the distribution business/ licensee and sold by it to the consumers shall be worked out based on the generation tariff determined by the Commission, under *Chapter V* of these Regulations.

75. Collection Efficiency.–

- (1) The distribution business/ licensee shall furnish through their petition actual category-wise data to substantiate its collection efficiency based on the details of current bills raised during the financial year, excluding the arrears and with details of its payment including data on delayed payments category wise during the same financial year. The licensee shall also file the said details for the four preceding financial years and the estimate for each financial year of the Control Period and the basis on which such collection efficiency has been worked out.
- (2) The distribution business/ licensee shall also propose a target for improvement of collection efficiency for each financial year of the Control Period, giving details of the measures proposed to be taken for achieving the targets proposed, along with the petition for approval of Aggregate Revenue Requirement for the Control Period.
- (3) The Commission shall after due consideration approve a target for improvement in collection efficiency for the Control Period; based on the opening level of collection efficiency, filings of the distribution business/ licensee, submissions and objections raised by the stakeholders and the findings of the Commission.
- (4) The impact on the revenue, due to the difference between the actual level of collection efficiency and the approved level of collection efficiency, shall be dealt with as part of the truing up of the respective financial year, in accordance with the mechanism provided in these Regulations and by suitably adjusting the provision for bad debts.

76. Components of Aggregate Revenue Requirement.–

- (1) The Aggregate Revenue Requirement of the distribution business/ licensee shall comprise of the following items of expenditure:-
 - (i) cost of own power generation;
 - (ii) cost of power purchase;
 - (iii) transmission charges;
 - (iv) NLDC/ RLDC/ SLDC charges, if any;
 - (v) operation and maintenance expenses;
 - (vi) Contribution to the Master Trust for discharging the pension liability;
 - (vii) interest and finance charges;
 - (viii) depreciation;
 - (ix) interest on working capital and on the consumer security deposits and deposits from users of the distribution system;
 - (x) contribution to the contingency reserves, if any;
 - (xi) actual write off, if any;
 - (xii) return on equity/ net fixed assets;
 - (xiii) Revenue surplus or revenue gap on account of truing up of accounts of previous years and the carrying cost, if any.
- (2) The incentive or disincentive for the overall performance as per Kerala State Electricity Regulatory Commission (Licensees' Standards of Performance)

Regulations, 2015, as amended from time to time, shall be suitably included in the annual revenue requirements for each financial year.

- (3) The following items, if any, shall be deducted from the gross amount of Aggregate Revenue Requirement; computed as specified above:-
- (i) Other income and non-tariff income;
 - (ii) income from wheeling charges recovered from open access consumers;
 - (iii) income from other business, to the extent specified in these Regulations;
 - (iv) receipts on account of cross subsidy surcharge on wheeling charges from open access consumers; and
 - (v) receipts on account of additional surcharge, if any, on wheeling charges from open access consumers:

77. Approval of Power Purchase Agreement. –

- (1) The distribution licensee shall not enter into any long term or medium term power purchase without the formal approval of the Commission, based on a petition filed by the distribution licensee.
- (2) Every agreement for procurement of power by the distribution business/ licensee from the generating business/ company or licensee or from other sources of supply entered into after the date of commencement of these Regulations shall come into effect only with the approval of the Commission:

Provided that the approval of the Commission shall also be required in accordance with this Regulation, for any change to an existing agreement for power procurement; whether or not, such existing agreement was approved by the Commission.

- (3) Every proposal for procurement of power on medium term or long term basis shall be filed as petition complete in all respects before the Commission, at least 120/180 days respectively before the date of commencement of the proposed supply.
- (4) The Commission shall examine such petition for approval of the Power Purchase Agreement having regard to, the approved Power Procurement Plan of the distribution business/ licensee and the following factors:-
- (i) requirement of power under the approved Power Procurement Plan;
 - (ii) adherence to a transparent process of bidding in accordance with the guidelines issued by the Central Government under *Section 63* of the Act;
 - (iii) adherence to the terms and conditions for determination of tariff specified under *Chapter V* of these Regulations, where the process specified in clause (ii) above has not been adopted;
 - (iv) Deviations to (ii) and (iii) above and whether such deviations have the approval of the competent authority;
 - (v) availability (or expected availability) of capacity in the intra-State transmission system for evacuation and supply of power procured under the agreement; and

- (vi) Need to promote co-generation and generation of electricity from renewable sources of energy.
- (5) Where the terms and conditions specified under *chapter V* of these Regulations are proposed to be adopted, the proposal for a power purchase agreement between the generating business/ company and the distribution business/ licensee for supply of electricity from a new generating station whose tariff is yet to be finalized under Section 62 of the Electricity Act 2003 shall comprise of the following two steps:-
 - (i) approval of a provisional tariff, on the basis of a petition made to the Commission by the distribution licensee at any time prior to the drawal of power from the new Generating Station;
 - (ii) Approval of the final tariff and the Power Purchase Agreement under Section 86(1)(b) of the Electricity Act 2003, on the basis of a petition made not later than three months from the cut-off date by the distribution licensee.

78. Short-term power procurement.–

- (1) The distribution business/ licensee may, if it considers necessary undertake additional short-term power procurement to overcome any short term deficiency in power requirement during the financial year, as per the short term power procurement plan approved by the Commission, in accordance with this Regulation.
- (2) Where there has been an anticipated 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 an agreement for additional short-term procurement of power:

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

- (3) The distribution business/ licensee may enter into a short-term power procurement agreement or arrangement under the following circumstances subject to the ceiling tariff approved by the Commission for this purpose: -
 - (i) where the distribution business/ licensee is able to source new short-term source of supply from which power can be procured at a tariff that reduces its approved total power procurement cost;
 - (ii) when faced with emergency conditions that threaten the stability of the distribution system or when formally directed to do so by the State Load Despatch Centre to prevent grid failure;
 - (iii) where the tariff for power procured under such agreement or arrangement is in accordance with the guidelines for short-term procurement of power by distribution licensees through tariff based bidding process issued by the Central Government;

- (iv) when there is a contingency situation and power purchase price is within the ceiling price as prescribed by the Commission in the distribution licensee's ARR&ERC;
- (v) procurement of short-term power through power-exchange; and
- (vi) Procurement by way of exchange of energy under 'banking' transactions:

Provided that prior approval of the Commission and the ceiling rate; shall not be applicable to the short term purchases under clause (ii).

Provided further that prior approval of the Commission is not required for short term purchases under clause (v) above, so long as the average rate for each month is within the ceiling rate.

- (4) The Commission may stipulate the ceiling quantum and ceiling rate for purchase of power from short-term sources.
- (5) As far as practicable, approval for all power purchases must be sought in advance. Where it is not practicable due to any contingency situation, the distribution licensee shall within fifteen days from the date of entering into an agreement or arrangement for short-term power procurement shall file a petition for approval of the Commission by filing full details of such agreement or arrangement, including quantum, tariff calculations, duration, supplier details, method for supplier selection, circumstances necessitating such a purchase and such other details as the Commission may require 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 agreement or arrangement entered into by the distribution business/ licensee does not meet the criteria specified in this Regulation, the Commission may disallow all such transactions from the annual revenue requirements, the net increase in the cost of power on account of such procurement apart from any other action that the Commission may initiate as per law against the distribution licensee.

79. Transmission charges and State Load Despatch Centre charges.–

- (1) The distribution licensee shall pay transmission and wheeling charges for transmission or wheeling of power purchased by it, as per the tariff determined by the Appropriate Commission.
- (2) National Load Despatch Centre (NLDC)/ Regional Load Despatch Centre (RLDC)/ State Load Despatch Centre (SLDC) charges as determined by the Appropriate Commission shall also be allowed as expenses to the distribution licensee.
- (3) The distribution business/ licensee shall be allowed to recover the transmission charges payable for the access to and the use of the intra-State transmission system and the State Load Despatch Centre charges, in accordance with the tariff approved by the Commission for the transmission business/ licensee under *Chapter VI and Chapter VII* of these Regulations.

80. Operation and Maintenance expenses.–

- (1) The distribution licensee shall be allowed to recover the operation and maintenance expenses, as per the norms specified in *Annexure 7* to these Regulations, for each financial year of the Control Period:

Provided that the distribution business of KSEB Limited shall be allowed to recover the annual pension contribution paid to the Master Trust, based on the actuarial valuation and subject to prudence check by the Commission, in respect of the personnel allocated to the distribution business of KSEB Limited, in addition to the above specified normative operation and maintenance expenses:

- (2) The distribution business of the following licensees in the State shall be allowed to recover the operation and maintenance expenses, as per the norms specified in *Annexure - 7* to these Regulations, for each financial year of the Control Period:-

- (i) Cochin Special Economic Zone Authority (CSEZA), Kakkanad, Kochi;
- (ii) Techno Park, Kazhakuttam, Thiruvananthapuram;
- (iii) KINESCO Power & Utilities Pvt. Ltd. (KPUPL), Kakkanad, Kochi;
- (iv) Rubber Park of India (P) Ltd (RPIL), Valayanchirangara, Ernakulum;
- (v) Kanan Devan Hills Plantation Company Private Ltd. (KDHPCL), Munnar;
- (vi) Cochin Port Trust (CoPT), Willingdon Island, Kochi;
- (vii) Thrissur Corporation Electricity Department (TCED), Thrissur;
- (viii) Info Park, Kakkanad, Kochi; and
- (ix) Smart City Kochi Infrastructure Pvt Limited, Kochi.

- (3) Any one time Operation and maintenance expenditure of a special nature not in the form of routine repair and maintenance, if any, if required and is undertaken by the distribution licensee, expenses for such maintenance may be allowed by the Commission after prudence check, considering the circumstances, details and justification furnished by the Distribution business/ licensee for incurring such an expenditure, to the satisfaction of the Commission.

- (4) In case any distribution licensee obtains licence for a new area of supply, the operation and maintenance expenses for such area shall be allowed separately, based on the details furnished by the such licensee and after due prudence check by the Commission.

81. Contribution to Contingency reserves, investment and its utilization.–

- (1) Where the distribution business/ licensee has made a provision to the contingency reserve, a sum not more than 0.25 percent of the original cost of the fixed assets, shall be allowed annually towards such provision in the calculation of Aggregate Revenue Requirement:

Provided that the distribution licensee shall open a separate account and deposit all such sums approved by the Commission during the truing up of the distribution licensee's accounts:

Provided further that where the cumulative amount of such contingency reserve exceeds five per cent of the original cost of the fixed assets, no such appropriation shall be allowed:

Provided also that the amount so appropriated shall be invested in the Securities, authorized under the Indian Trust Act, 1882, within six months from the close of the financial year and a statement of such investment filed before the Commission immediately thereafter:

- (2) The Contingency Reserve shall not be drawn without the prior approval of the Commission during the term of the licence, except to meet the following charges:-
 - (i) Expenses or loss of profits arising out of accidents or circumstances, which the licensee could not have prevented;
 - (ii) Unanticipated and unavoidable expenses on replacement or removal of the plant or works other than expenses required for normal maintenance or renewal; and
 - (iii) compensation payable under any law for the time being in force and for which no other provision is made:

Provided that such drawal from the contingency reserve shall be computed after making due adjustments for any other amounts that may have been received by the distribution business/ licensee as part of an insurance cover.

82. Bad Debts.—

- (1) The distribution business/ licensee shall furnish to the Commission along with the True Up petition the age wise schedule of sundry debtors, efforts taken to recover such debts and an assessment of the recoverability of the debtors, as certified by the distribution licensee's Audit Committee.
- (2) The Commission may allow the actual write off or any part thereof of the bad debts only after assessing the prudence and requirement of such write off.

83. Other Income.—

- (1) The receipts of other income of the distribution business/ licensee, as approved by the Commission, shall be deducted from the Aggregate Revenue Requirement while determining the tariff of the distribution business/ licensee.
- (2) The indicative list of items to be considered as other income includes,-
 - (iii) interest on staff loans and advances;
 - (iv) income from statutory investments;
 - (v) income from trading;
 - (vi) income from rent of land or buildings;
 - (vii) income from sale of scrap;
 - (viii) income from staff welfare activities;
 - (ix) rental from staff quarters;
 - (x) excess found on physical verification;

- (xi) interest on investments, fixed and call deposits and the bank balances;
 - (xii) interest on the advances to suppliers/ contractors;
 - (xiii) income from hire charges from the contractors and others;
 - (xiv) income due to right of way granted for laying fibre optic cables/ coaxial cables on the distribution system;
 - (xv) income from advertisements etc.;
 - (xvi) miscellaneous receipts;
 - (xvii) commission for the collection of electricity duty;
 - (xviii) interest received on delayed or deferred payment on the bills;
 - (xix) rebate from central generating stations;
 - (xx) interest income earned from security deposits;
 - (xxi) normative interest income calculated based on accumulated regulatory surplus;
 - (xxii) Any other receipts.
- (3) The distribution business/ licensee shall file full details of its forecast of non-tariff income and other Income to the Commission, along with its petition for approval of the Aggregate Revenue Requirements.
- (4) The interest earned from the investments made out of the return on investment by the distribution business/ licensee shall not be included in other Income.

84. Income from Other business.–

- (1) Where the distribution business/ licensee has as per Section 51 of the Act engaged in any other business for optimum utilization of the assets of its electricity business, an amount equal to one-half of the revenue from such other business, after deduction of all the direct and indirect costs attributed to such other business, shall be deducted from the Aggregate Revenue Requirement of the distribution business/ licensee.
- (2) Where the sum total of the direct and indirect costs of such other business, exceeds the revenue from such other business, the distribution licensee shall file a petition before the Commission clearly indicating the nature of business, its income and its sources, expenses, reasons for shortfall along with measures taken/ proposed to be taken to overcome the situation and seeking directions from the Commission in this regard. No amount however shall be allowed to be added to the Aggregate Revenue Requirement of the distribution business/ licensee on account of such other business.
- (3) The distribution business/ licensee shall follow a reasonable basis for allocation of all the joint and common costs between the distribution business and the other business, and shall file the allocation statement with justification to the Commission, duly audited and certified by the statutory auditors, along with its petition for determination of tariff.

85. Determination of Tariff.–

- (1) The bulk supply tariff and retail supply tariff of the distribution licensees, and the wheeling charges for use of the distribution system shall be determined by the Commission, on the basis of a petition for determination of tariff made by the distribution licensee in accordance with the provisions under *Chapter III* of these Regulations.
- (2) The retail supply tariff for each category of consumers of the different distribution business/ licensees in the State of Kerala shall be determined by the Commission separately based on their ARR & ERC and truing up of accounts, and after considering their overall performance;

Provided that while determining the Retail Tariff the Commission may give due consideration to policy statements / objectives/ directions issued by the State Government as part of their efforts for encouraging any or specific category of consumers within their area of supply.

- (3) The Commission may allow the licensee to sell the surplus energy, if any, to its consumers instead of selling in the open market or power exchanges in the following manner:
 - (a) For its open access consumers at a price existing in the power exchange at the respective time block of the day, with the margin for accounting the line loss;

Provided that the licensee shall announce the quantity of surplus energy available in advance, but not later than a day ahead through their website or any appropriate means so as to enable the open access consumers to express interest for the purchase of the same.

- (b) For consumers other than open access consumers, at a price existing in the power exchange at the average price of the day and the margin for accounting the line loss at respective voltage level, for any quantity required by such consumer, higher than the threshold level as determined by the licensee.

Provided that while determining the threshold level of consumption of any consumer, the licensee shall take the average consumption for the previous three months.

- (4) The bulk supply tariff for supply of electricity by KSEB Limited to other distribution licensees in the State of Kerala shall be determined by the Commission, in accordance with the principles laid down from time to time, in the orders of the Commission with regard to such distribution licensees.
- (5) The Commission may categorize consumers on the basis of their load factor, power factor, voltage, total consumption of electricity during any specified period

or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.

- (6) The retail supply tariff for different consumer categories shall be determined after considering the average cost of supply. The average cost of supply shall be computed as the ratio of the approved aggregate revenue requirements of the distribution business/ licensee for each financial year, calculated in accordance with *Regulation 76*, to the total sale of the distribution business/ licensee for the respective financial year.
- (7) The Commission shall endeavour to reduce gradually, the cross-subsidy among consumer categories with respect to the average cost of supply, in accordance with the provisions of the Act and the provisions of the Kerala State Electricity Regulatory Commission (Principles for Determination of Roadmap for Cross-subsidy Reduction for Distribution Licensees) Regulations, 2012.
- (8) The wheeling charges may be denominated in terms of Rupees/ kWh or Rupees/ kW/ month, or any such basis; for the purpose of recovery from the user of the distribution system, as stipulated by the Commission from time to time.
- (9) 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 that if no such manner is indicated, the subsidy/ grant shall be used to reduce the overall gap between the Commission approved Aggregate Revenue Requirement and the Commission approved actual revenue of the distribution business/ licensee.

- (10) While determining the tariff, the Commission shall also consider the cost of supply at different voltage levels and the need to minimize the tariff shock to any category of consumers.
- (11) Distribution licensee shall purchase the excess energy injected into the system by a renewable energy prosumer, as provided in sub regulation 5 of Regulation 21 of KSERC (Renewable and Net Metering) Regulations, 2020 at the Average Power Purchase Cost. The Commission shall determine the APPC every financial year based on a petition filed by the distribution licensee not later than 31st July of the succeeding year

86. Determination of Wheeling charges.–

- (1) The wheeling charges of the distribution business/ licensee may be determined by the Commission on the basis of the segregated accounts filed by the licensee for distribution wires business.
- (2) In case, the distribution business/ licensee is not able to file audited/ certified separate accounts for the distribution wires business and retail supply business,-

- (i) The distribution business/ licensee shall file to the Commission for its approval, an allocation matrix for segregation of the expenses between the distribution wires business and the retail supply business with proper justification and certification by the statutory auditor;
 - (ii) The Commission may take appropriate decision on such allocation matrix for segregation of expenses between the distribution wires business and the retail supply business.
- (ii) The wheeling charges payable by a user of the distribution system of the distribution business/ licensee may comprise of the demand charges or variable charges or any combination thereof, as may be stipulated by the Commission in such order.

87. Fuel Surcharge Formula.–

- (1) The tariff or any part of tariff determined in accordance with these Regulations shall not ordinarily be amended, more frequently than once in any financial year, except in respect of any changes expressly permitted by the Commission under the terms of fuel surcharge formula specified in this Regulation.
- (2) Fuel surcharge is the amount approved by the Commission for all the Commission approved PPAs having provision for fuel surcharge, in terms of the formula specified in *Annexure 3* of these Regulations, by way of recovery from or refund to the consumer, so as to enable the distribution business/ licensee to pass through to the consumer as additional expenditure or savings due to,-
 - (i) the difference between the actual cost of fuel and the cost of fuel approved in the Aggregate Revenue Requirement by the Commission for the generation of electricity in the generating stations owned by the distribution business/ licensee; and
 - (ii) The difference on account of the change in the cost of fuel, between the actual cost of power purchase and the cost of power purchase as approved by the Commission in the Aggregate Revenue Requirement.
- (3) The distribution business/ licensee may be allowed by the Commission to adjust the fuel surcharge on quarterly basis, at the rate and for the period of adjustment as approved by the Commission, based on the petition filed by the distribution business/ licensee specifically for this purpose.
- (4) The amount of fuel surcharge to be adjusted shall be determined by the Commission in accordance with the formula specified in *Annexure 3*.
 - (i) The difference between the actual cost of fuel and the approved cost of fuel for own generation shall be computed for each quarter with respect to the month wise quantity of generation as approved by the Commission in the Aggregate Revenue Requirement of the distribution business/ licensee, based on merit order.

- (ii) The difference between the actual cost of power purchase and the approved cost of power purchase on account of the change in cost of fuel shall be computed for each quarter, with respect to the month wise quantity of power purchase as approved by the Commission in the Aggregate Revenue Requirement of the distribution business/ licensee, based on merit order.
- (5) Every distribution business/ licensee shall, within forty five days after the close of each quarter, file before the Commission a petition with all the relevant details required for the approval of the amount of fuel surcharge to be adjusted from the consumers along with the proposed rate and period of such adjustment:
- Provided that the distribution licensees who purchase electricity from KSEB Limited in bulk for retail sale, are exempted from the above requirement.
- (6) The Commission may, after prudence check, approve with modifications if any, the amount of fuel surcharge to be adjusted from the consumers and stipulate the rate and the period of such adjustment.
- (7) The rate of adjustment of fuel surcharge shall be expressed as paise per kWh and it shall be adjusted in the energy charges as per the existing tariff for the energy billed to each consumer, on a monthly or bi-monthly basis, as the case may be.
- (8) The adjustment on account of fuel surcharge as approved by the Commission shall be effected from the third month of the subsequent quarter onwards or as directed by the Commission.
- (9) The fuel surcharge adjustment shall be uniformly applicable to all the consumers in the State, except the domestic consumers with connected load of and below 1000 Watts and having monthly consumption of and below 40 units.
- (10) The Commission may decide the appropriate rate and period of adjustment of the amount of fuel surcharge, considering the impact on the tariff of the consumers.
- (11) Once the period of adjustment approved by the Commission is over, no further amount on account of fuel surcharge shall be collected from their consumers till further orders of the Commission.
- (12) The distribution business/ licensee shall file to the Commission,-
- (i) The month-wise details of the changes in the cost of fuel with respect to the approved cost for all its generating stations using liquid fuel or gas or coal, for each quarter separately.
 - (ii) The source wise and month-wise details of the changes in the cost of power purchase with respect to the approved cost of power purchase on account of change in cost of fuel, for each quarter separately.
 - (iii) The month-wise details as specified in clauses (i) and (ii) above shall be filed on quarterly basis in the *Format*, as specified in *Annexure 3(a)* to these Regulations.

(13) Distribution licensees who purchase electricity from KSEB Limited in bulk for retail sale,-

- i. shall within fifteen days of the close of each month, provide to KSEB Limited with a copy to the Commission, the month-wise details of the retail sale of energy to facilitate the estimation of fuel surcharge;
- ii. KSEB Limited shall consolidate the details of such retail sales and indicate with calculations, the provisional amount and the rate of fuel surcharge to be adjusted, along with the details furnished in *Annexure 3(a)*.

(14) The distribution licensees who purchase electricity in bulk from KSEB Limited shall promptly adjust to KSEB Limited on a monthly basis, the amount of fuel surcharge adjusted from their consumers.

(15) The Commission may seek additional information or any other documents, if any required, from the distribution business/ licensee and the distribution business/ licensee shall file the details within the time limit stipulated by the Commission.

88. Adjustment of the cost due to change in hydro-thermal mix.–

1. The distribution business/ licensee shall, within forty five days from the close of every financial year, file separately the particulars relating to the change in cost, if any, due to the change in hydro-thermal mix on account of the change in rainfall and consequent change in the cost of purchase of power.
2. The Commission may after due consideration, approve the change in cost of power purchase on account of change in hydro-thermal mix, after prudence check of all the relevant information filed by the distribution business/ licensee and give appropriate directions on the adjustment of such amount.

89. Cross Subsidy Surcharge and Additional surcharge.–

- (1) The consumers who are permitted open access 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 6* to these Regulations.
- (2) In addition, the Open access consumer is liable to be charged 'Additional surcharge on charges of wheeling', as approved by the Commission.
- (3) The cross subsidy surcharge and the additional surcharge shall be levied in the manner specified in the Kerala State Electricity Regulatory Commission (Connectivity and Intra state Open Access) Regulations, 2013, as amended from time to time.
- (4) The amount received by the distribution business/ licensee by way of cross-subsidy surcharge and additional surcharge, as approved by the Commission, shall be deducted from the Aggregate Revenue Requirement while calculating the tariff for distribution business/ licensee.

90. Norms for Operation. –

3. It shall be the duty of the distribution business/ licensee to make power available to the consumers or prospective consumers power on demand and to ensure one hundred percent supply of electricity to its consumers, at all times.
4. The distribution business/ licensee shall make necessary and sufficient arrangements to ensure availability of electricity, either by own generation or by purchase of electricity or both, to meet quality, 24x7 electrical power supply throughout the year, in its area of supply.
5. The gross availability of electricity for supply by a licensee,-
 - (i) Shall be computed based on the availability of electricity to meet the base load and the peak load;
 - (ii) The availability of electricity to meet the base load shall be computed in accordance with the following formula:-

Availability of electricity to meet the base load = sum of electricity in MW generated and contracted for purchase to meet the base load ÷ the base load in MW.
 - (iii) The availability of electricity to meet the peak load shall be computed in accordance with the following formula:-

Availability of electricity to meet the peak load = sum of electricity in MW generated and contracted for purchase to meet the peak load ÷ the peak load in MW:

Provided that the peak load shall be calculated based on the un-restricted demand of the distribution business/ licensee.
 - (iv) The gross availability of electricity for supply shall be computed in accordance with the following formula; giving seventy percent weightage to the availability of electricity to meet the base load and thirty percent weightage to the availability of electricity to meet the peak load:-

Gross availability of electricity for supply = Availability of electricity to meet the base load x 0.70 + Availability of electricity to meet the peak load x 0.30.
- (4) For every one percent under achievement by the distribution business/ licensee in the gross availability of electricity for supply, the rate of return on equity or the rate of return on the net fixed assets, as the case may be, shall be reduced by 0.1 %.
- (5) The distribution business/ licensee shall file to the Commission quarterly reports along with the calculation of availability of electricity for supply.

CHAPTER IX
MISCELLANEOUS

91. Power to remove the difficulties.-

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by general or specific order, for reasons to be recorded in writing, make such provisions not inconsistent with the provisions of the Act, as may be necessary for removing the difficulty.

92. Power of relaxation.-

The Commission, for reasons to be recorded in writing, may relax, in public interest, any of the provisions of these Regulations on its own motion or on a petition made before it by an interested person.

93. 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:

Provided that the Commission may by order, for the purpose of obtaining data or information for taking decisions or for reviewing the performance; vary, alter or modify any forms specified in the *Annexure IX* or stipulate new forms in the *Annexure IX* for collection of data or information, without following the procedures for amendment of the Regulations.

94. Inquiry and investigation.-

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

95. Repeal and savings.-

(1) Save as otherwise provided in these Regulations, the “Kerala State Electricity Regulatory Commission (Terms and conditions for determination of Tariff) Regulations, 2018”, is hereby repealed.

(2) Notwithstanding such repeal,-

(i) Any proceedings before the Commission pertaining to the period till March 31, 2022, including determination of tariff or truing up or review matters pertaining to the period upto 31st March 2022, shall be governed by the Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of

Tariff) Regulations, 2018, the Kerala State Electricity Regulatory Commission (Terms and Conditions of Tariff for Retail Sale of Electricity) Regulations, 2006 and the Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Distribution and Retail Sale of Electricity under the MYT Framework) Regulations, 2006, including the amendments thereto, as the case may be.

- (ii) Anything done or any action taken or purported to have been done or taken including any order or declaration made or any licence, permission, authorization or exemption granted or any document or instrument executed or any direction given under the repealed Regulations shall, in so far as it is not inconsistent with the provisions of these Regulations, be deemed to have been done or taken under the corresponding provisions of these Regulations.

By Order of the Commission,

Secretary

Explanatory Memorandum

(This does not form part of the Notification but is intended to achieve its general purport)

The Commission, under Section 32, 61, 62 and 86 of the Electricity Act, 2003; is vested with the functions of regulating the tariff of the generation, transmission, and distribution of electricity bulk or retail, as the case may be, within the State of Kerala. While specifying the Terms and Conditions for determination of tariff; the Commission is to be guided by the National Electricity Policy, the Tariff Policy, and the Multi-Year Tariff (MYT) principles and for determination of the tariff applicable to the Generating Companies and Transmission Licensees, the principles and methodologies specified by the Central Electricity Regulatory Commission ('CERC').

The Ministry of Power (MoP) has notified the National Electricity Policy and the Tariff Policy which provides the guidelines for determination of the tariff and Annual Revenue Requirement (ARR). The National Electricity Policy provides; certain guidelines on the performance norms and also stipulates the need to provide incentives and disincentives, as reproduced below:

“5.8.5 All efforts will have to be made to improve the efficiency of operations in all the segments of the industry. Suitable performance norms of operations together with incentives and disincentives will need to be evolved along with appropriate arrangement for sharing the gains of efficient operations with the consumers. This will ensure protection of consumers’ interests on the one hand and provide motivation for improving the efficiency of operations on the other”.

“5.11 Tariff policy lays down the following framework for performance based cost of service regulation in respect of aspects common to generation, transmission as well as distribution...”

The Present Tariff Regulations, namely (Terms and Conditions for Determination of Tariff) Regulations, 2018 Notified vide Kerala Gazette dated 26.10.2018, is valid for the four year Control Period till 31st March, 2022. Commission has framed the present draft Multi Year Tariff Regulations valid for a five year period, for the next control period from 1st April, 2022. The intent of these Regulations includes achieving certainty in Electricity tariff in the State which can catalyze investment both in the Sector as well as in the General economic field of the State.

The Commission has taken due cognizance of the Electricity Act 2003, the National Electricity Policy, National Tariff Policy, the challenges faced by the Commission while implementing the earlier tariff regulations and also by other ERCs (Electricity Regulatory Commissions) and the data gaps that were noticed during the tariff proceedings, for preparing this draft MYT Regulations, namely; (Terms and Conditions for Determination of Tariff) Regulations, 2021.

The proposed draft of the new Regulations is prepared based on the following criteria:

- The Control Period will be five years (2022 -2027); Midterm review during FY 2024 -2025 is proposed;
- Escalation factor for the control period has been decided; based on a ratio of 70:30 for the weightage of CPI: WPI and after considering the average inflation during the past 4 years before 31.3.2020;

- O&M costs will be based on the trued up expenses for the financial year 2018-19;
- ROE is proposed at 14% of the Equity;
- ROE of licensees without equity is required to be revised from the existing 3% of NFA to 7% of NFA;
- The parameters for fixing the O&M cost of Distribution business is proposed to be revised from four to five, including the LT line length also;
- Depreciation is proposed to be provided for the assets created during the Control Period using Grants and Contribution, provided a separate Depreciation Fund Account is maintained by the licensee;
- Fuel surcharge variation is proposed to be done every 3 months as existing;

Suggestions and comments on the draft Regulations are solicited from the stakeholders.

List of Annexure

Annexure	Details	Pages
1	Depreciation schedule	
2	Procedure for calculation of Transmission system availability for a month	
2(a)	SIL of AC Transmission lines	
2(b)	Formula for calculation of availability of each category transmission element	
3	Fuel surcharge formula for thermal stations	
3(a)	Form –FSA: Format 1 to 4	
4	Guidelines for in principle clearance of investment schemes	
5	Ceiling norms for capitalized initial spares	
6	Formula for calculating Cross subsidy surcharge	
7	Methodology adopted for specifying the normative O&M costs	
8	Date of Commercial Operation of intra state generation, transmission and distribution system	
9	FORMATS	
G	ARR & Tariff Formats – Generation: (G1.1 to G8)	(32+4) Nos
T	ARR & Tariff Formats – Transmission: (T1 to T17)	(22+4) Nos
S	ARR & Tariff Formats – SLDC: (S1 to S11)	(14+4) Nos
D	ARR & Tariff Formats – Distribution: (D1.1 to D9)	(35+8) Nos

ANNEXURE – 1: DEPRECIATION SCHEDULE

Sl. No.	Description of Assets	Depreciation % (straight line method)
A	Land owned under full title	0.00
B	Land under lease:	
	a) For investment in land	
	b) For cost of clearing the site	3.34
	c) Land for reservoir in case of Hydro generating station	
C	Assets purchased New:	
a)	Plant & Machinery in Generating stations including plant foundations	
	i) Hydro electric	
	ii) Steam electric	5.28
	iii) Diesel electric and Gas plant	
b)	Cooling towers and circulating water systems	5.28
c)	Hydraulic works forming part of hydro electric system including:-	
	i) Dams, Spillways, weirs, canals, reinforced concrete flumes & siphons	
	ii) Reinforced concrete & steel -pipelines and surge tanks, sluice gates, hydraulic control valves and other hydraulic works	5.28
d)	Building & Civil engineering works of permanent character	
	i) Office & show rooms	
	ii) Containing thermo electric generating plant	
	iii) Containing hydro electric generating plant	3.34
	iv) Temporary erection such as wooden structures	100.00
	v) Roads other than kutchra roads	3.34
	vi) Others	
e)	Transformers, Kiosk substation equipment & other fixed apparatus (including plant foundations)	
	i) Transformers (including foundation) having rating 100 kVA and over	
	ii) Others	5.28
f)	Switchgear including cable connections	5.28
g)	Lightning Arrestors	
	i) Station type	
	ii) Pole type	5.28
	iii) Synchronous condenser	
h)	Batteries	18.00
i)	UG cable including joint/ disconnection boxes	5.28
j)	Cable duct system	5.28
k)	Overhead lines including supports:	5.28

	i)	Lines on fabricated steel, operating at nominal voltage > 66 kV	
	ii)	Lines on steel supports, operating at voltage > 13.2 kV & </= 66 kV	
	iii)	Lines on steel or reinforced concrete supports	
	iv)	Lines on treated wood supports	
	l)	Meters	9.00
	m)	Self propelled vehicles	9.50
	n)	Air conditioning plants	
	i)	Static	5.28
	ii)	Portable	9.50
	o)	Office infrastructure	
	i)	Office furniture and fittings	
	ii)	Office equipments	6.33
	iii)	Internal wiring including fittings and apparatus	
	iv)	Street light fittings	5.28
	p)	Apparatus on hire	
	i)	Motors	6.33
	ii)	Other than motors	9.50
	q)	Communication equipments	
	i)	Radio and High frequency carrier system	
	ii)	Telephone lines and telephone	6.33
	iii)	Fibre optic	
	r)	IT equipments	15.00
	s)	Software	30.00
	t)	Any other assets not covered above	5.28
D		Assets purchased second hand	5.28

ANNEXURE – 2

Procedure for calculation of Transmission system availability for a month

1. Transmission system availability for a calendar month shall be computed separately for the Transmission licensee, and certified by the SLDC. The transmission elements shall be grouped into the following categories for the purpose of calculation of Transmission system availability:-
 - i) **AC transmission lines:**
Each circuit of AC transmission line shall be considered as one element.
 - ii) **Inter-Connecting Transformers (ICTs):**
Each ICT bank (three single phase transformer together) shall form one element.
 - iii) **Static VAR Compensator (SVC):**
SVC along with SVC transformer shall form one element. However, 50% credit to inductive and 50% to capacitive rating shall be given.
 - iv) **Bus Reactors/ Switchable line reactors:**
Each Bus Reactor/ Switchable line reactors shall be considered as one element.
2. The Availability of AC portion of transmission system shall be calculated as under:

% Availability for AC system =

$$[{\{(o \times AVo) + (p \times AVp) + (q \times AVq) + (r \times AVr)\} \times 100} \div (o + p + q + r)]$$

Where:

- o** is Total number of AC lines;
- AVo** is Availability of o number of AC lines;
- p** is Total number of Bus Reactors/ Switchable line reactors;
- AVp** is Availability of p number of Bus Reactors/ Switchable line reactors;
- q** is Total number of ICTs;
- AVq** is Availability of q number of ICTs;
- r** is Total number of SVCs;
- AVr** is Availability of r number of SVCs.

3. The weightage factor for each category of transmission element shall be as under:
 - i) For each circuit of AC line – Surge Impedance Loading (SIL) for Un compensated line multiplied by the Circuit Km;
 - ii) For each ICT bank – The rated MVA capacity;
 - iii) For SVC – The rated MVAR capacity (inductive & capacitive);
 - iv) For Bus reactor/ Switchable line reactors – The rated MVAR capacity;
 - v) SIL rating for various voltage level and conductor configuration is given in *Annexure 2 (a)*.
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 shall be as per *Annexure – 2 (b)*.

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 STU/ Transmission licensee for sanctioned construction works of their transmission system. The SLDC may restrict the deemed availability period to that considered reasonable for the work involved;
 - ii) Manual tripping of a transmission line to restrict over voltage and manual tripping of switched reactors, as per the directions of State Load Despatch Centre.

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 SLDC that the element outage was due to aforesaid events and not due to design failure shall rest on the transmission licensee. SLDC may allow a reasonable restoration time for the element 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 the 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 the State Load Despatch Centre while normalizing the system following grid incident/ disturbance within reasonable time, the element will be considered not available for the period of outage, after the issuance of SLDC's direction or restoration; and the outage time shall be attributable to the transmission licensee.

7. If the outage of any element causes loss of generation at an intra-state generating station, then the outage period for that element shall be deemed to be twice the actual outage period for the hour(s)/ day(s) on which such loss of generation has taken place.

ANNEXURE – 2 (a)
Surge impedance Loading (SIL) of AC Transmission lines

Sl. No.	Line voltage(kV)	Conductor Configuration	SIL (MW)
1	765	Quad Bersimis	2250
2	400	Quad Bersimis	691
3	400	Twin Moose	515
4	400	Twin AAAC	425
5	400	Quad Zebra	647
6	400	Quad AAAC	646
7	400	Triple Snowbird	605
8	400	ACKC (500/ 26)	556
9	400	Twin ACAR	557
10	220	Twin zebra	175
11	220	Single Zebra	132
12	220	Kundah	128
13	110	Single Panther	50
14	110	Wolf	32
15	66	Mink	14
16	66	Single Dog	10

Note: For the voltage levels and/ or conductor configurations not listed above, appropriate SIL based on technical considerations may be used for availability calculation under intimation to the Commission/ SLDC.

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ANNEXURE – 2(b)

Formula for calculation of availability of each category of Transmission element

1. AV_o (Availability of **o** number of AC lines) = $[\sum_{i=1}^o Wi(Ti - T_{NAi}) \div Ti] \div \sum_{i=1}^o Wi$;

Where, - Wi = Weightage factor for i^{th} transmission line;

Ti = the total hours of i^{th} AC line;

T_{NAi} = the non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability as per *Para 5 of Annexure 2*) for i^{th} AC line.

2. AV_p (Availability of **p** number of Bus reactors/ Switched line reactors) =

$$[\sum_{m=1}^p Wm(Tm - T_{NAM}) \div Tm] \div \sum_{m=1}^p Wm;$$

Where,-

Wm = Weightage factor for m^{th} Bus reactors/ Switched line reactors;

Tm = the total hours of m^{th} Bus reactors/ Switched line reactors;

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 Annexure 2*) for m^{th} Bus reactors/ Switched line reactors.

3. AV_q (Availability of **q** number of ICTs) = $[\sum_{k=1}^q Wk(Tk - T_{NAK}) \div Tk] \div \sum_{k=1}^q Wk$;

Where,-

Wk = Weightage factor for k^{th} ICT;

Tk = the total hours of k^{th} ICT;

T_{NAK} = the non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability as per *Para 5 of Annexure 2*) for k^{th} ICT.

4. AV_r (Availability of **r** number of SVCs) =

$$[\sum_{l=1}^r 0.5 \times Wil(Til - T_{NAil}) \div Til + \sum_{l=1}^r 0.5 \times Wcl(Tcl - T_{NAcl}) \div Tcl] \div$$

$$[\sum_{l=1}^r 0.5 \times Wil + \sum_{l=1}^r 0.5 \times Wcl]$$

Where,-

Wil & Wcl = Weightage factor for inductive & capacitive operation of l^{th} SVC;

Til & Tcl = the total hours of inductive & capacitive operation for l^{th} SVC;

T_{NAil} & T_{NAcl} = the non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability as per *Para 5 of Annexure 2*) of inductive & capacitive operation for l^{th} SVC.

ANNEXURE – 3

Fuel Surcharge Formula for Thermal Stations

The Formula for adjustment of fuel surcharge shall be as under:

The rate of fuel surcharge adjustment in **paise per kWh = $(F \div E) \times 100$** ;

Where,-

F = the amount of fuel surcharge in rupees, which is the sum of F_g , F_p and A ,
(F_g and F_p shall be calculated for each station month-wise and added up);

E = Energy billed for retail sale to the consumers other than the domestic consumers with connected load of and below 1000 W and consumption of and below 40 kWh, in the relevant quarter, based on the approved level of transmission and distribution loss;

A = Balancing term to take care of the difference, if any, in the energy sales;

F_g = the change in the cost of fuel for generation of electricity from own stations:

$$F_g = \sum_1^n Q_g \times (R1 - R2);$$

Where,

Q_g is the quantity of fuel used for generation of electricity from own stations:

Q_g = (Approved station heat rate in kilo calories per kWh x Actual or approved energy, whichever is less, in MU x 1000) ÷ Calorific value of the fuel in kilo calories per kilo gram;

R1= Actual price of fuel in rupees per metric ton;

R2= Approved price of fuel in rupees per metric ton.

F_p = the change in cost of the energy purchased, due to the change in fuel cost:

$$F_p = \sum_1^n Q_p \times (P1 - P2);$$

Where,

Q_p = Actual quantity of energy purchased or approved, whichever is lesser;

P1 = Actual price of purchased energy in rupees per kWh;

P2 = Approved price of purchased energy in rupees per kWh.

The Format (Form – FSA) to be provided by the licensee every half year, with details of monthly changes in fuel cost is given in Annexure -3 (a).

ANNEXURE – 3(a)
(Form - FSA)

**Details of the monthly changes in Fuel cost, to be provided by the licensee
in every Quarter of the financial year**

Form 1: Details of the month wise energy billed or retail sale for the quarter;

Sl. No	Month	Retail sales (kWh)		T & D loss (%)		Energy Input (kWh)	
		Actual	Approved	Actual	Approved	Actual	Approved
1							
2							
3							

Form 2: Month wise generation from own sources & IPPs (station wise) for each month of the quarter;

Sl. No	Source	Energy Generation (kWh)		Aux. consumption (kWh)		Net Energy Input (kWh)	
		Actual	Approved	Actual	Approved	Actual	Approved
1							
2							
3							
4							
5							

Form 2 contd,-

Sl. No	Source	Station heat rate (kcal/ kWh)		Calorific value of fuel (kcal/kWh)	Quantity of Fuel (MT)		Price of Fuel (Rs./MT)	
		Actual	Approved		Actual	Approved	Actual	Approved
1								
2								
3								
4								
5								

Note:

- 1) If more than one fuel is used, information is to be provided separately for each fuel;
- 2) In the case of IPPs, norms as per PPA are to be provided.

Form 3: Month wise details of purchase of energy (for each month of the quarter);

Sl. No	Source	Energy Purchased (kWh)		Unit Cost (Rs./ kWh)		Total cost (Rs.)	
		Actual	Approved	Actual	Approved	Actual	Approved
1							
2							
3							
4							
5							
.							

Form 4: Source wise energy input for the quarter;

Sl. No	Source	Month -1		Month -2		Month -3	
		Actual	Approved	Actual	Approved	Actual	Approved
1							
2							
3							
4							
5							

ANNEXURE – 4

Guidelines for Provisional clearance of Investment schemes

These Guidelines shall be adhered to by all the generating businesses/ companies, transmission businesses/ licensees, distribution businesses/ licensees, and the State Load Despatch Centre; while filing their Capital Investment Plan petition. The methodology and evaluation criteria for evaluation of these capital investment schemes are detailed below:

A. Submission of capital investment plan,-

The generating businesses/ companies, transmission businesses/ licensees, distribution businesses/ licensees, and the State Load Despatch Centre shall file the capital investment plan as a petition, either as a part of their yearly ARR petition or as a separate petition 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 fully justifying the proposed investment including DPR, capital cost, period of completion etc. so as to facilitate a proper evaluation by the Commission.

B. Capital investment schemes,-

- (1) For the purpose of these guidelines, a capital investment scheme means:
 - i) Any capital expenditure programme of the transmission business/ licensee, distribution business/ licensee, and State Load Despatch Centre for the acquisition, construction or improvement of a permanent facility or nature in the respective business;
 - ii) Capital investment scheme involving replacement, renovation and modernization or life extension of any existing fixed assets of the generating business/ company.
- (2) The schemes shall be planned considering the five year investment horizon.
- (3) 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 circle:**
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 filed to a financial institution like Rural Electrification Corporation, Power Finance Corporation, etc., or for funding under Revised Accelerated Power Development & Reform Programme.

C. Submission of Detailed Project Reports,-

- (1) For the capital investment schemes exceeding the amount of Rs. 10 Crores in the case of KSEB Ltd and Rs.15 lakhs in the case of distribution licensees other than KSEB Ltd, detailed project report shall be filed to the Commission for consideration and approval including the need for the investment and its cost-benefit analysis.
- (2) The capital investment plans shall constitute a least cost plan.
- (3) 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.

D. Evaluation of the detailed project reports,-

(1) Provisional clearance:

During this stage, the Commission would provisionally consider giving the go ahead for the proposed scheme considering primarily its scope, proposed investment and objective, time frame, source of funds and its cost-benefit analysis while keeping in view the following criteria:-

(i) Statutory requirements:

- a) Whether the proposed capital investment is necessary to discharge the duties and obligations of the generating businesses/ companies, transmission businesses/ licensees, distribution businesses/ licensees, and State Load Despatch Centre, as per the Electricity Act, 2003 and rules and Regulations made thereunder?
- b) Whether the proposed capital investment is in line with such provisions, Rules and Regulations?

(ii) Need for investment:

- a) Whether the proposed capital investment is necessary to set-up the infrastructure;
 - To strengthen the system to meet the normal load growth;
 - To supply to new consumers;
 - For improving the quality of supply to consumers.
- b) Whether the equipments are operating close to their rated capacities and the proposed capital investment is necessary?
 - To increase the reliability of the system;
 - For life extension of the equipment;
 - 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 proposed equipment is reasonable?
- d) What is the average rate of technology obsolescence for the proposed equipment?
- e) Whether the proposed investment would improve the reliability of supply?
- f) Whether the investment is necessary for a reduction in transmission or distribution losses?

(iv) **Timing of the investment:**

- a) Whether the timing of the investment is optimum?
- 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?

(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 in the past, if any?
- c) Whether the least cost option has been considered?

(2) Final approval after capitalization, while approving the Aggregate Revenue Requirement & expected revenue from charges,-

During this stage, the impact of the capital expenditure schemes will be included in the Aggregate Revenue Requirement, based on the approved capital expenditure and any cost over-run, if approved by the Commission.

ANNEXURE- 5

Ceiling norms for the Capitalized Initial Spares (as percentage of the cost of the plant and machinery upto the cut-off date)

(a) Coal based/ lignite fired thermal generating station:	4.0%
(b) Gas turbine/ combined cycle thermal generating stations:	4.0%
(c) Hydro generating stations including pumped storage:	4.0%
(d) Transmission & Distribution system:	
(i) Transmission Line & Distribution line -	1.0%
(ii) Transmission sub-station & Distribution 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 -	3.5%
(vii) Static synchronous compensator	6.0%

ANNEXURE- 6

Formula for calculating Cross Subsidy Surcharge

Cross subsidy surcharge shall be calculated as per the following formula:

$$S = T - [C \div \{1 - (L \div 100)\} + D + R];$$

Where,-

S is the Cross Subsidy Surcharge;

T is the tariff payable by the relevant category of consumers including reflecting the Renewable Purchase Obligation;

C is the per unit weighted average cost of power purchase by the Licensee including meeting the Renewable Purchase Obligation;

D is the aggregate transmission, distribution and wheeling charges applicable to the relevant voltage level;

L is the aggregate transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level;

R is the *per unit* cost of carrying regulatory assets:

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

Provided further that the surcharge shall not exceed 20% of the tariff applicable to the category of consumers seeking open access:

Provided also that the Commission may after recording the reason thereof, order the levy of the surcharge determined for consumers of a distribution licensee, from consumers of one or more other distribution licensees:

Provided also that the Commission in consultation with the Government may exempt levy of cross subsidy surcharge on Railways, as defined in the Railways Act 1989 (Central Act No 24 of 1989), on electricity purchase for its own consumption.

ANNEXURE – 7

Methodology adopted for specifying the normative Operation & Maintenance (O&M) Costs for the 5 year Control Period (2022-27)

1. **The O&M costs consist of:**
 - The Employee cost;
 - The Administrative & General (A&G) expenses; and
 - The Repair & Maintenance (R&M) costs.

The annual inflation/ escalation rate under the control period (2018-22) was fixed at 4.84% based on the CPI (Industrial workers) & WPI indices in the weightage ratio 70:30, for the 4 year period (2013-14 to 2016-17). Considering the 5 year MYT period in this Regulation and the erratic performance of the economy in the year 2020-21 due to the 'Covid 19' pandemic; it is proposed to fix the annual **escalation factor** for the 5 year MYT control period (2022-23 to 2026-27) as follows:-

- a) The average of the increase in the CPI & WPI indices, for the 4 year period (2017-18 to 2020 -21), as given in **Table- 1** below:

Table- 1
Computation of Escalation Factors for this MYT Regulation

Sl. No	Escalation factors/ year	2017-18	2018-19	2019-20	2020-21
1	CPI (Industrial Workers) 2001=100	284.42	299.90	322.50	338.69
2	Annual CPI increase %	3.08	5.44	7.54	5.02
3	WPI (2011-12) series	114.90	119.80	121.80	123.40
4	Annual WPI increase %	2.96	4.26	1.67	1.31
5	CPI:WPI (70:30) weightage (%)	3.04	5.09	5.78	3.91
6	Average 4 Year annual increase @ 70:30 weightage (%)	4.454%			

Note:

The Commission notes that there have been severe fluctuations as far as the inflation indices are concerned. Further, due to the outbreak of COVID 19, and overall depressing economic situation has been faced by all major industries in the country, the offtake of electricity during this period has considerably been reduced and there has been a glut as far as the electricity market is concerned.

However as of now, the economy seems to be on a path of revival and the increase in oil prices have also added to the overall inflation in the economy. Hence, the Commission feels that any data of past indices may not completely reflect the true economic situation in the country and its inflationary trends and therefore is of the opinion that while for the purpose of ARR&ERC for the control period, it would be advisable to rely on historical data inflation data for the previous four years can be used. But the actual escalation rates based on the actual inflation existing for the year at the time of the respective truing up would be a more reliable basis and hence would be adopted.

- b) As shown above, the average inflation based on CPI-WPI at 70:30 weightage for the last year period works out to 4.454%. This percentage is taken as the escalation factor for the control period for the purpose of ARR&ERC.

2. Common steps adopted for Generation, Transmission & Distribution Businesses of KSEB Ltd,-

- (i) The O&M costs approved for the year 2018-19 based on the Order for the MYT period dated 8-7-2019 is taken as the base year.
- (ii) The annual increase on account of pay revision is to be added to this figure since pay revision has been implemented from 2018-19, effective for the month of July for officers and August for workers. As per the accounts of KSEB Ltd, provision of Rs.176 Crore has been included for the same.
- (iii) Additional expenses for pay revision is arrived at for a year from the provision made for the year 2018-19 considering the same as for 8.5 months. Thus, the expected additional amount for pay revision for a full year is arrived at as Rs.248.47 crore.
- (iv) The base year O&M expenses for 2018-19 is the sum of the approved expenses for 2018-19 together with the additional expenses for pay revision as shown below:

Table- 2
Computation of Escalation Factors for this MYT Regulation

Particulars	SBU-G	SBU-T	SBU-D	Total
	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore
Employee expenses	124.15	363.23	1,979.83	2,713.46
A&G Expenses			246.25	
R&M Expenses				
Prov. For pay revision	11.36	33.15	203.96	248.47
Total	135.51	396.38	2,430.04	2,961.93

(a) SBU-Generation of KSEB Ltd,-

The O&M expenses for SBU-G for the year 2018-19 (including pay revision) is escalated at the escalation rate of 4.84% per annum (based on the average escalation rate of the control period 2018-19 to 2021-22), for arriving the notional O&M expenses of the Generation business for the years 2019-20, 2020-21 & 2021 -22 of the current control period. The above notional figure for 2021- 22 is escalated at the escalation rate arrived for the control period (4.454%) for arriving at the O&M expenses for SBU-G for the control period 2022-23 to 2026-27 as shown below:

Table - 3
O&M cost for the Generation business of KSEB Ltd. for the control period (2022-23 to 2026-27) in Rs. Crores

Year	Current Control period (Indicative only)				Control period				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
SBU-G	135.51	142.07	148.95	156.16	163.12	170.38	177.97	185.90	194.18

(b) SBU-T Transmission Business of KSEB Limited,-

- (i) O&M expenses for the Transmission business are allowed based on number of Bays and the Circuit kilometers of transmission lines including and above 66kV@ 75:25 ratio.
- (ii) As mentioned in Table 1, O&M expenses for 2018-19 including pay revision expenses is Rs.396.38 Crore. After allocating the amount on 75:25 basis to bays and circuit km is as shown below:

Table – 4

	Ratio	Notional O&M Cost for 2018-19 (Rs. Crore)	No. of Bays / Circuit km	Rs. lakh/bay & Rs. lakh/circuit km
Bay	75%	297.28	2,564.00	11.59
Lines	25%	99.09	9,529.59	1.04
Total	100%	396.38		

- (iii) The above normative per unit O&M cost for 2018-19 as per Table-4 above for the financial year 2018-19, is escalated at 4.84% per annum for determining the notional per unit O&M cost for the present control period 2019-20, 2020-21 & 2021-22.
- (iv) The above notional per unit O&M cost for 2021-22 is escalated at the rate of 4.454% for this MYT control period is as shown below:

Table – 5

	Current control period (indicative only)				Control period				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Rs./lakh per Bay	11.59	12.16	12.74	13.36	13.96	14.58	15.23	15.91	16.61
Rs./lakh per circuit km	1.04	1.09	1.14	1.20	1.25	1.31	1.37	1.43	1.49

- (v) The O&M expenses for any year of the new control period shall be allowed by multiplying the normative O&M costs for that year with the actual number of bays and transmission line length in circuit kilometre at the beginning of the year. i.e., the O&M expenses for the financial year 2022-23 shall be allowed by multiplying the normative O&M costs for the financial year 2022-23 with the actual number of bays and transmission line length in circuit kilometre at the beginning of the financial year 2022-23.

(c) SBU-D Distribution Business of KSEB Limited,-

- (i) The parameters for allowing 'the employee costs and A&G expenses' for the distribution business under this MYT Regulation shall be:
- a) the number of consumers 20%
 - b) the number of distribution transformers 25%
 - c) the length of HT lines in kilometres 20%
 - d) the length of LT lines in kilometres 20%
 - e) The quantum of energy sales 15%

- (ii) As mentioned in Table 2, the O&M expenses for 2018-19 including pay revision expenses is Rs.2183.79 crore. After allocating the amount to the five parameters, the normative O&M costs for the control period is as shown below:

Table – 6

Particulars		Ratio	2018-19 Rs. crore	Normative Value	Unit
No. of consumers (Nos)	12276321	20%	436.76	3.558	Rs.lakh/1000 consumers
No. of Distribution Transformers (Nos)	77724	25%	545.95	0.702	Rs.lakh/transformer
Length of HT lines (km)	62835	20%	436.76	0.695	Rs.lakh/km line
Length of LT lines (km)	286784	20%	436.76	0.152	Rs.lakh/km line
Energy Sales (MU)	20880.7	15%	327.57	0.157	Rs./unit
Employee cost & A&G expenses			2,183.79		

- (iii) The above normative Average Employee cost and A&G expense for 2018-19 is allocated among the five parameters viz. No. of consumers, No. of distribution transformers, length of HT lines, length of LT lines and Energy sold in the ratio; 20: 25: 20: 20:15 to arrive at per unit cost for each parameter for the year 2018-19. This norm is escalated @ 4.84% to fix the notional norms for years 2019-20 to 2021-22.
- (iv) The per unit rate arrived for 2021- 22 is escalated at the escalation rate of 4.454% for the control period to arrive at the norm for the MYT control period as indicated in the Table-7 below:

Table- 7

Particulars	Current control period indicative only				Control period				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Rs. lakh /1000 consumers	3.558	3.730	3.910	4.100	4.282	4.473	4.672	4.880	5.098
Rs. lakh/ transformer	0.702	0.736	0.772	0.809	0.845	0.883	0.922	0.964	1.006
Rs. lakh/km HT line	0.695	0.729	0.764	0.801	0.837	0.874	0.913	0.954	0.996
Rs.lakh/LT line	0.152	0.160	0.167	0.175	0.183	0.191	0.200	0.209	0.218
Rs./unit	0.157	0.164	0.172	0.181	0.189	0.197	0.206	0.215	0.225

- (v) The O&M expenses (excluding the R&M expenses) for any year of the control period shall be allowed by multiplying the per unit cost of the parameters for that year (provided in Table- 6 above), with the actual number of consumers, number of distribution transformers, length of HT & LT lines in kilometre and the energy sales for the year (at the beginning of the year). i.e. the O&M expenses for the financial year 2022-23 shall be allowed, by multiplying the per unit cost of the parameters for the financial year 2022-23 with the actual; number of consumers, number of distribution transformers, length of HT & LT lines in kilometre at the beginning of the year (2022-23) and the energy sold for the previous year 2021-22.

- (vi) The R&M expenses for the distribution business is benchmarked @ **4.0%** of the value of the opening Distribution Gross Fixed Assets (excluding the value of land and land under lease) as on 1st April of the respective financial year.
- (vii) The Normative O&M cost for each year for SBU-D is the is the sum of the figures under clauses (v) & (vi) above.

3. Normative O&M Costs for the licensees, other than KSEB Limited,-

- (i) The latest approved trued up expenses for the licensees other than KSEB Ltd is for the years 2017-18 to 2019-20 as shown in Table 8. The O&M expenses after excluding the onetime expenses is taken for arriving at the norms:

Table 8

(In Rs. lakhs)

Particulars	2017-18	2018-19	2018-19	2018-19	2018-19	2018-19	2019-20	2019-20
	KPUPL	RPIL	Infopark	TCED	Technopark	CSEZA	CPT	KDHPCL
Employee Cost	49.72	59.55	19.07	1092.6	22.55	154.45	382.06	145.89
R&M Expenses	76.11	35.62	20.11	82.01	263.67	7.35	28.15	36.59
A&G Expenses	39.99	16.18	2.33	74.81	29.98	25.98	71.25	12.09
Total	165.82	111.35	41.51	1249.42	316.20	187.78	481.46	194.57

Note: The Commission has, in the truing up Orders of KDHPCL, RPIL, Technopark, KUPUL, CPT and TCED had directed to furnish the details on staff for arriving at the reasonable employee expenses. However such exercise could not be completed since some of these licensees have not furnished the required information. Accordingly, the Commission has constrained to keep the respective latest trued up figures of O&M norms for the control period without providing any escalation. The above licensees including Infopark, CSEZA and Smart City, Kochi are also directed to furnish these details for arriving the employee expenses along with their ARR&ERC petition to be filed for the control period as per these Regulations. The allowable norms for the control period will be decided based on such details furnished by the licensees. Till such time, no escalation will be allowed for the O&M expenses for the control period and the allowable O&M expenses will be limited to the latest trued up figures only.

- (ii)The base year is taken as 2021-22 and the expenses for the based year is arrived at after escalating the latest trued up expenses (after removing onetime expenses) using an escalation rate of 4.84% as shown below:

Table 9

	2021-22	2021-22	2021-22	2021-22	2021-22	2021-22	2021-22	2021-22
	KPUPL	RPIL	Infopark	TCED	Technopark	CSEZA	CPT	KDHPCL
Employee Cost	49.72	59.55	19.07	1092.6	22.55	154.45	382.06	145.89
R&M Expenses	76.11	35.62	20.11	82.01	263.67	7.35	28.15	36.59
A&G Expenses	39.99	16.18	2.33	74.81	29.98	25.98	71.25	12.09
Total	165.82	111.35	41.51	1249.42	316.2	187.78	481.46	194.57

(iii) As mentioned above, the O&M expense (in Rs. lakhs) for the control period is as shown below:

Particulars	KPUPL				
	2022-23	2023-24	2024-25	2025-26	2026-27
Employee Cost	49.72	49.72	49.72	49.72	49.72
R&M Expenses	76.11	76.11	76.11	76.11	76.11
A&G Expenses	39.99	39.99	39.99	39.99	39.99
Total	165.82	165.82	165.82	165.82	165.82

Particulars	RPIL				
	2022-23	2023-24	2024-25	2025-26	2026-27
Employee Cost	59.55	59.55	59.55	59.55	59.55
R&M Expenses	35.62	35.62	35.62	35.62	35.62
A&G Expenses	16.18	16.18	16.18	16.18	16.18
Total	111.35	111.35	111.35	111.35	111.35

Particulars	Infopark				
	2022-23	2023-24	2024-25	2025-26	2026-27
Employee Cost	19.07	19.07	19.07	19.07	19.07
R&M Expenses	20.11	20.11	20.11	20.11	20.11
A&G Expenses	2.33	2.33	2.33	2.33	2.33
Total	41.51	41.51	41.51	41.51	41.51

Particulars	TCED				
	2022-23	2023-24	2024-25	2025-26	2026-27
Employee Cost	1092.6	1092.6	1092.6	1092.6	1092.6
R&M Expenses	82.01	82.01	82.01	82.01	82.01
A&G Expenses	74.81	74.81	74.81	74.81	74.81
Total	1249.42	1249.42	1249.42	1249.42	1249.42

Particulars	Technopark				
	2022-23	2023-24	2024-25	2025-26	2026-27
Employee Cost	22.55	22.55	22.55	22.55	22.55
R&M Expenses	263.67	263.67	263.67	263.67	263.67
A&G Expenses	29.98	29.98	29.98	29.98	29.98
Total	316.20	316.20	316.20	316.20	316.20

Particulars	CSEZA				
	2022-23	2023-24	2024-25	2025-26	2026-27
Employee Cost	154.45	154.45	154.45	154.45	154.45
R&M Expenses	7.35	7.35	7.35	7.35	7.35
A&G Expenses	25.98	25.98	25.98	25.98	25.98
Total	187.78	187.78	187.78	187.78	187.78

Particulars	Cochin Port Trust				
	2022-23	2023-24	2024-25	2025-26	2026-27
Employee Cost	382.06	382.06	382.06	382.06	382.06
R&M Expenses	28.15	28.15	28.15	28.15	28.15
A&G Expenses	71.25	71.25	71.25	71.25	71.25
Total	481.46	481.46	481.46	481.46	481.46

Particulars	KDHPCL				
	2022-23	2023-24	2024-25	2025-26	2026-27
Employee Cost	145.89	145.89	145.89	145.89	145.89
R&M Expenses	36.59	36.59	36.59	36.59	36.59
A&G Expenses	12.09	12.09	12.09	12.09	12.09
Total	194.57	194.57	194.57	194.57	194.57

(iv) In the case of Smart city, Kochi, since the truing up has not been completed, the actual figures for 2018-19 is considered for employee expenses and R&M expenses. In the case of A&G expenses, security expenses are considered at the actual level for 2017-18 (Rs.4.90 lakh). Accordingly, the norms for the control period are arrived at as shown below:

	Notional figures				Smart City				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Employee Cost	19.57	19.57	19.57	19.57	19.57	19.57	19.57	19.57	19.57
R&M Expenses	16.35	16.35	16.35	16.35	16.35	16.35	16.35	16.35	16.35
A&G Expenses	14.67	14.67	14.67	14.67	14.67	14.67	14.67	14.67	14.67
Total	50.59	50.59	50.59	50.59	50.59	50.59	50.59	50.59	50.59

Annexure - 8
Date of Commercial Operation of intra state generation, transmission and distribution system

1. Date of Commercial Operation (COD) of Thermal generating station,-

- (1) Date of commercial operation, in case of a unit of intra State Thermal Generating Station, shall mean the date declared by the generating company after demonstrating the unit capacity corresponding to its Maximum Continuous Rating (MCR) or the Installed Capacity (IC) or Name Plate Rating, on designated fuel through a successful trial run and after getting the clearance from the SLDC, and in case of the generating station as a whole, the date of commercial operation of the last unit of the generating station:

Provided that,-

- (i) Where the beneficiaries/ buyers have been tied up for purchasing power from the generating station, the trial run or each repeat of trial run shall commence after a notice of not less than seven days by the generating company to the beneficiaries/ buyers and SLDC;
- (ii) Where the beneficiaries/ buyers have not been tied up for purchasing power from the generating station, the trial run or each repeat of trial run shall commence after a notice of not less than seven days by the generating company to the SLDC.
- (2) The generating company shall certify that,-
- a) The generating station meets the relevant requirements and provisions of the Technical Standards of: Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010, Central Electricity Authority (Measures relating to safety and Electric supply) Regulations, 2010, the Indian Electricity Grid Code and the State Grid Code, as applicable;
- b) The main plant equipments and auxiliary systems; including Balance of Plant, such as Fuel Oil System, Coal Handling Plant, Demineralization plant, pre-treatment plant, fire fighting system, Ash Disposal system and any other site specific systems, have been commissioned and are capable of full load operation of the units of the generating station on a sustained basis;
- c) Permanent electric supply system; including emergency supplies and all necessary instrumentation, control and protection systems and auto loops for full load operation of unit, have been installed and put in service.
- (3) The certificates as required under sub-regulations above shall be signed by the CMD/ CEO/ MD of the generating company and a copy of the certificate shall be filed to SLDC.
- (4) Trial run shall be carried out in accordance with the details as provided in section 3 below of this Annexure.
- (5) Partial loading may be allowed with the condition that the average load during the

duration of the trial run shall not be less than the Maximum Continuous Rating or the Installed Capacity or the Name Plate Rating, excluding the period of interruption and partial loading but including the corresponding extended period.

- (6) Where on the basis of the trial run, a unit of the generating station fails to demonstrate the unit capacity corresponding to Maximum Continuous Rating or Installed Capacity or Name Plate Rating, the generating company has the option to de-rate the capacity or to go for repeat trial run. Where the generating company decides to de-rate the unit capacity, the demonstrated capacity in such cases shall be equal to or more than 105% of the de-rated capacity.
- (7) The SLDC shall convey clearance to the generating company for declaration of COD within 7 days of receiving the generation data based on the trial run.
- (8) If the SLDC notices any deficiencies in the trial run, it shall be communicated to the generating company within seven (7) days of receiving the generation data based on the trial run.
- (9) The Scheduling of power from the generating station or unit thereof shall commence from 00.00 hrs after declaration of COD.

2. Date of Commercial Operation of Hydro Generating Station,-

- (1) Date of commercial operation (COD) in relation to a generating unit of a hydro generating station including pumped storage hydro generating station shall mean the date declared by the generating company after demonstrating the peaking capability corresponding to the Installed Capacity of the generating station through a successful trial run, and after getting clearance from the SLDC; and in relation to the generating station as a whole, the date of commercial operation of the last generating unit of the generating station:

Provided that,-

- (i) Where beneficiaries have been tied up for purchasing power from the generating station, trial run or each repeat of trial run shall commence after a notice of not less than seven days by the generating company to the beneficiaries and SLDC:
 - (ii) Where the beneficiaries/ buyers have not been tied up for purchasing power from the generating station, the trial run shall commence after a notice of not less than seven days by the generating company to SLDC.
- (2) The generating company shall certify that,-
 - i. The generating station or unit thereof meets the requirement and relevant provisions of the technical standards of Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010; Indian Electricity Grid Code and this Code, as applicable,-
 - ii. The main plant equipment and auxiliary systems including Drainage Dewatering system, Primary and Secondary cooling system, LP and HP air compressor, Fire fighting system etc. have been commissioned and are

- capable for full load operation of units on sustained basis,-
- iii. Permanent electric supply system including emergency supplies and all necessary Instrumentation, Control and Protection Systems and auto loops for full load operation of the unit have been installed and put into service.
- (3) The certificates as required above shall be signed by the CMD/ CEO/ MD of the generating company and a copy of the certificate shall be filed to the SLDC, before declaration of COD.
 - (4) Trial run shall be carried out in accordance with details given below;
 - i. Where on the basis of the trial run, a unit of the generating station fails to demonstrate the unit capacity corresponding to Maximum Continuous Rating or Installed Capacity or Name Plate Rating, the generating company shall have the option to either de-rate the capacity or to go for repeat trial run. If the generating company decides to de-rate the unit capacity, the demonstrated capacity in such cases shall be equal to or more than 110% of the derated capacity.
 - ii. In case a hydro generating station with pondage or storage is not able to demonstrate the peaking capability corresponding to the installed capacity for the reason of insufficient reservoir or pond level, the date of commercial operation of the last unit of the generating station shall be considered as the date of commercial operation of the generating station as a whole, and it shall be mandatory for such hydro generating station to demonstrate peaking capability equivalent to installed capacity of the generating station or unit thereof, as the case may be, as and when such reservoir/ pond level is achieved.
 - iii. If a run-of-river hydro generating station or a unit thereof is declared under commercial operation during lean inflows period, when the water inflow is insufficient for such demonstration of peaking capability, it shall be mandatory for such hydro generating station or unit thereof to demonstrate peaking capability equivalent to installed capacity as and when sufficient water inflow is available. In case of failure to demonstrate the peaking capacity, the unit capacity shall be de-rated to the capacity demonstrated with effect from the COD.
 - (5) The SLDC, shall accord clearance to the generating company within seven (7) days of receiving the generation data based on the trial run.
 - (6) If the SLDC notices any deficiency in the trial run, it shall be communicated to the generating company within seven (7) days of receiving the generation data based on trial run.
 - (7) Scheduling shall commence from 00.00 hrs after declaration of COD.

3. Trial Run or Trial Operation,-

- (1) Trial Run or Trial Operation in relation to a thermal Intra State Generating Station or a unit thereof shall mean successful running of the generating station or unit thereof on designated fuel at Maximum Continuous Rating or Installed Capacity or Name Plate Rating for a continuous period of 72 hours and in case of a hydro intrastate Generating Station or a unit thereof for a continuous period of 12 hours:
Provided that,-
 - (i) The short interruptions during the trial run, for a cumulative duration of 4 hours, shall be permissible, with corresponding increase in the duration of the test.
 - (ii) Cumulative Interruptions of more than 4 hours shall call for repeat of the trial operation or trial run;
- (2) The partial loading may be allowed with the condition that average load during the duration of the trial run shall not be less than the Maximum Continuous Rating, or the Installed Capacity or the Name Plate Rating excluding period of interruption and partial loading but including the corresponding extended period.
- (3) Where the beneficiaries have been tied up for purchasing power from the generating station, the trial run or each repeat of trial run shall commence after a notice of not less than seven days by the generating company to the beneficiaries and SLDC.
- (4) Units of thermal and hydro Central Generating Stations and inter State Generating Stations shall also demonstrate capability to raise load upto 105% or 110% of this Maximum Continuous Rating or Installed Capacity or the Name Plate Rating, as the case may be.

4. Date of Commercial Operation (COD) of intra - State Transmission System,-

- (1) Date of Commercial operation in relation to an intra State Transmission System or an element thereof shall mean; the date declared by the transmission licensee from 00.00 hour, of which an element of the transmission system is in regular service after successful trial operation, for transmitting the Electricity and Communication signal from the sending end to the receiving end:

Provided that in the case of intra State Transmission System executed through Tariff Based Competitive Bidding, the transmission licensee shall declare COD of the STS in accordance with the provisions of the Transmission Service Agreement.
- (2) Where the transmission line or substation is dedicated for evacuation of power from a particular generating station and the dedicated transmission line is being implemented other than through tariff based competitive bidding, the concerned 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; in accordance with Chapter IV and Chapter VI of the Kerala State

Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2021 or any subsequent amendment thereto or re-enactment thereof. In case the transmission line or substation dedicated to a generator is being implemented through tariff based competitive bidding, then matching of commissioning of the transmission line/ substation and generating station shall be monitored by STU and SLDC.

- (3) Where the transmission system executed by a transmission licensee is required to be connected to the transmission system executed by any other transmission licensee and both transmission systems are executed in a manner other than through tariff based competitive bidding, the transmission licensee shall endeavour to match the commissioning of its transmission system with the transmission system of the other licensee as far as practicable, and shall ensure the same through an appropriate Implementation Agreement. Where either of the transmission systems or both are implemented through tariff based competitive bidding, the progress of implementation of the transmission systems in a matching time schedule shall be monitored by the STU/ SLDC.
- (4) In case a transmission system or an element thereof is not available for regular service on or before the scheduled COD 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 of other transmission licensee, the transmission licensee shall approach the Commission through an appropriate petition for necessary orders and guidance in such matters.
- (5) An element shall be declared to have achieved COD only after all the elements which are pre-required to achieve COD as per the Transmission Service Agreement are commissioned. In case any element is required to be commissioned prior to the commissioning of pre-required element, the same can be done if; STU/ SLDC confirm that such commissioning is in the interest of the power system.
- (6) The transmission licensee shall file a certificate from the CMD/ CEO/ MD of the Company that the transmission line, substation and communication system conform to the relevant Grid Standards and Grid Code, and are capable of operation to their full capacity.
- (7) Trial run and Trial operation in relation to a transmission system or an element thereof shall mean; successful charging of the transmission system or an element thereof for 24 hours at continuous flow of power, and communication signal from the sending end to the receiving end and with requisite metering system, telemetry and protection system in service, enclosing the certificate to that effect from the SLDC.

5. **Date of Commercial Operation in relation to a Communication System** or an element thereof; shall mean, the date declared by the transmission licensee from 00.00 hour of which a communication system or element thereof shall be put into service after completion of site acceptance tests, including transfer of voice and data to respective control centre, as certified by the State Load Dispatch Centre.

ANNEXURE – 9

INDEX of FORMATS (Generation/ Transmission/ SLDC/ Distribution) for filing the petition for approval of Aggregate Revenue Requirement (ARR) and Tariff

GENERATION - FORMS (G)		
S. No	Form No.	Particulars
1	2	3
1	G 1.1	Summary of Tariff Proposal
2	G 1.2	Aggregate Revenue Requirement
3	G 2.1	Plant Characteristics
4	G 2.2	Operational Parameters - Generation
5	G 3.1	Revenue from Sale of Power
6	G 3.2	Other Income
7	G 3.3	Capital Subsidies and Grants
8	G 4	O&M Expenses
9	G 4 (a)	Employee Expenses
10	G 4 (b)	Administrative & General Expenses
11	G 4 (c)	Repair & Maintenance Expenses
12	G 5.1	Energy Charges for Thermal Generation
13	G 5.2	Fuel Cost Details for Thermal Generation
14	G 6.1	Fixed assets & provisions for depreciation
15	G 6.2 (a)	Calculation of Weighted Average Rate of Interest on Actual Loans
16	G 6.2 (b)	Calculation of Interest on Normative Loan
17	G 6.2 (c)	Interest on bonds to meet Terminal Liabilities
18	G 6.3	Details of Project Specific Tariff
19	G 6.4	Consolidated report on additions to Fixed Assets during each year from 2020-21 to 2026-27
20	G 6.5	Abstract of Capital Cost Estimates and Schedule of Commissioning for the New projects
21	G 6.6	Break-up of Capital Cost for Thermal projects
22	G 6.7	Break-up of the Construction / Supply / Service packages
23	G 6.8	Draw Down Schedule for Calculation of IDC & Financing Charges (year wise from commencement of works to COD)
24	G 6.9	Return on Equity/Return on Net Fixed Assets
25	G 6.10	Statement of Additional Capitalization after COD and Details for Financing
26	G 6.11	Interest on Working Capital
27	G 6.12	Tax on ROE
28	G 6.13	Inflow Review (Water Year)
29	G 6.14	Month wise inflow in MCM
30	G 6.15	Maintenance Schedule and net hydro capacity available (MW)
31	G 7.1	Proposed improvement in performance
32	G 8	Deviation Analysis

Other Information/ Documents:		
1	G P&L	Profit & Loss Account
2	G BS	Balance Sheet at the end of the year
3	G CF	Cash Flow for the year
4	Corporate audited/unaudited Balance Sheet and Profit & Loss Accounts With all the Schedules & annexure for the relevant years.	

TRANSMISSION - FORMS (T)		
Sl. No.	Form No.	Particulars
1	2	3
1	Form T 1	Summary of Aggregate Revenue Requirement
2	Form T 2	Operation and Maintenance Expenses
3	Form T2 (a)	Employee Expenses
4	Form T 2 (b)	Administrative & General Expenses
5	Form T 2 (c)	Repair & Maintenance Expenses
6	Form T 3	Fixed assets & Depreciation
7	Form T 4 (a)	Calculation of Weighted Average Rate of Interest on Actual Loans
8	Form T4 (b)	Calculation of Interest on Normative Loan
9	Form T4 (c)	Interest on Bonds to meet terminal liabilities
10	Form T 5	Interest on working capital requirement
11	Form T 6	Other items (Other debits or any other items)
12	Form T 7	Return on Equity/Return on Net Fixed Assets
13	Form T 8	Income Tax Provisions
14	Form T 9	Revenue at Existing Transmission Tariff
15	Form T 10	Other Income
16	Form T 11	Expected Revenue at Proposed Transmission Tariff
17	Form T 12	Revenue Subsidy and Grant
18	Form T 13	Consumer Contribution, Capital Subsidy and Grant
19	Form T 14	Proposed improvement in performance
20	Form T 15	Transmission Losses
21	Form T 16	Forecast of Electricity transmitted (MU)
22	Form T17	Deviation Analysis

Other Information/ Documents:		
1	Form T P&L	Profit & Loss Account
2	Form T BS	Balance Sheet at the end of the year
3	Form T CF	Cash Flow for the year
4	Corporate audited/unaudited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexure for the relevant years.	

SLDC - FORMS (S)		
S. No.	Form No.	Particulars
1	2	3
1	Form S 1	Summary of Aggregate Revenue Requirement (SLDC)
2	Form S 2	Operation and Maintenance Expenses (SLDC)
3	Form S 2.1	Employee Expenses
4	Form S 2.2	Administrative and General Expenses (SLDC)
5	Form S 2.3	Repair and Maintenance Expenses (SLDC)
6	Form S 3	Interest on working capital requirement (SLDC)
7	Form S 4	RLDC Fees and Charges (SLDC)
8	Form S 5	Fixed assets & provisions for depreciation (SLDC)
9	Form S 6	Loan Repayment & Interest Liability (SLDC)
10	Form S7	Return on Equity/ Return on Net Fixed Assets (SLDC)
11	Form S 8	Income Tax Provisions (SLDC)
12	Form S 9	Other Income (SLDC)
13	Form S 10	Summary of Revenue from current fees and charges
14	Form S 11	Deviation Analysis

Other Information/ Documents:		
1	Form S P&L	Profit & Loss Account (SLDC)
2	Form S BS	Balance Sheet at the end of the year (SLDC)
3	Form S CF	Cash Flow for the year (SLDC)
4	Corporate audited/ unaudited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexure for the relevant years.	

DISTRIBUTION - FORMS (D)		
S. No.	Form No.	Particulars
1	2	3
1	Form D 1.1	Summary of Aggregate Revenue Requirement
2	Form D 2.1	Revenue from Sale of Power
3	Form D 2.2	Income from Wheeling Charges
4	Form D 2.3	Income from sale of surplus power
5	Form D 2.4	Other Income
6	Form D 2.5	Subsidy provided by the State Government under Section 65 of EA 2003
7	Form D 2.6	Revenue Subsidy and Grant
8	Form D 2.7	Consumer Contribution, Capital Subsidy and Grant
9	Form D 3.1	Power Purchase Expenses
10	Form D 3.2	Transmission Charges
11	Form D 3.3	Load Despatch Charges
12	Form D 3.4	Operations and Maintenance Expenses

13	Form D 3.4 (a)	Employee Expenses
14	Form D 3.4 (b)	Administrative & General Expenses
15	Form D 3.4 (c)	Repair & Maintenance Expenses
16	Form D 3.5	Fixed assets & depreciation
17	Form D 3.6 (a)	Calculation of Weighted Average Rate of Interest on Actual Loans
18	Form D 3.6 (b)	Calculation of Interest on Normative Loan
19	Form D 3.6 (c)	Interest on Bonds to meet Terminal Liabilities
20	Form D 3.7	Interest on Working Capital
21	Form D 3.8	Return on Equity/Return on Net Fixed Assets
22	Form D 3.9	Tax on R.O.E.
23	Form D 4.1	Project-wise / Scheme-wise Capital Expenditure
24	Form D 4.2	Consolidated report on additions to Fixed Assets during the year
25	Form D 4.3	General (Other debits, write offs or any other items)
26	Form D 5.1	Consumer category wise Existing Tariff
27	Form D 5.2	Consumer category wise Proposed Tariff
28	Form D 5.3	(a)Revenue from existing Tariff 2020 -21 (actual)
	Form D 5.3	(b)Revenue from existing Tariff 2021 -22 (Estimated)
	Form D 5.3	(c)Revenue from proposed tariff 2022 -23 (Projected)
29	Form D 6.1	Improvement in performance
30	Form D 6.2	Appropriation of Distribution loss
31	Form D 7.1	Category-wise Sales
32	Form D 7.2	Distribution Losses
33	Form D 7.3	Collection Efficiency
34	Form D 8	Deviation Analysis
35	Form D 9	Consumer category-wise cross-subsidy

Other Information/ Documents:		
1	Form D P&L	Profit & Loss Account
2	Form D BS	Distribution Business Balance sheet
3	Form D CF	Cash Flow for the year
4	Form KSEBL SBU-wise P&L	KSEB Limited SBU-wise Profit & Loss Account
5	Form- Licensee - Distrn. P&L	Distribution Licensees - Distribution business Profit & Loss Account
6	KSEBL -SBU -BS	SBU wise Balance Sheet of KSEB Ltd.
7	Form -BS-Others	Balance sheet of Other licensees
8	Corporate	Audited/ Unaudited Balance sheet and Profit & Loss Accounts with all the Schedules & annexure for the relevant years

Note: Spread sheet financial models (in CD) shall also be submitted along with the Petition.