III. Any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

Explanation-The premium, if any, raised by the generating company while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station.

(2) The generating company, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station;

(3) In case of the generating station declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

Provided that in case of a generating station which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

(4) In case of the generating station declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.

CHAPTER -6

Computation of Capital Cost

19. Capital Cost:

(1) The Capital cost of the generating station as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.

(2) The Capital Cost of a new project shall include the following:

(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;

(b) Interest during construction and financing charges, on the loans

(i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or

(ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

(c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;

(d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;

(e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;

(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;

(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 6 of these regulations;

(h) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving ends of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;

(i) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;

(j) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(k) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;

(l) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;

(m) Expenditure on account of change in law and force majeure events; and

(n) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(3) The Capital cost of an existing project shall include the following:

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;

(b)Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(4) The capital cost in case of existing or new hydro generating station shall also include:

(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and

(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

(5) The following shall be excluded from the capital cost of the existing and new projects:

(a) The assets forming part of the project, but not in use, as declared in the tariff petition;

(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project: Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.

(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;

(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and

(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.

20. Prudence Check of Capital Cost

The following principles shall be adopted for prudence checks of capital cost of the existing or new projects:

(1)In case of the thermal generating station, prudence check of capital cost shall include scrutiny of the capital expenditure, in the light of capital cost of similar projects based on past historical data, wherever available, reasonableness of financing plan, interest during construction, incidental expenditure during construction, use of efficient technology, cost over-run and time over-run, procurement of equipment and materials through competitive bidding and such other matters as may be considered appropriate by the Commission:

Provided that, while carrying out the prudence check, the Commission shall also examine whether the generating company has been careful in its judgments and decisions in execution of the project.

(2) The Commission may, for the purpose of vetting of capital cost of hydro generating stations, appoint an independent agency or an expert body:

(3) Where the power purchase agreement entered into between the generating company and the beneficiaries provides for ceiling of actual capital expenditure, the Commission shall take into consideration such ceiling for prudence check.

(4) The generating company shall furnish the capital cost for execution of the existing and new projects as per Forms annexed to these Regulations along with tariff petition for the purpose of creating a database of benchmark capital cost of various components.

21. Interest During Construction (IDC) and Incidental Expenditure during Construction (IEDC)

(1) Interest during construction (IDC) shall be computed corresponding to the loan from the date of infusion of debt fund, and after taking into account the prudent phasing of funds up to SCOD.

(2) Incidental expenditure during construction (IEDC) shall be computed from the zero date, taking into account pre-operative expenses up to SCOD:

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

(3) In case of additional costs on account of IDC and IEDC due to delay in achieving the COD, the generating company shall be required to furnish detailed justifications with supporting documents for such delay including prudent phasing of funds in case of IDC and details of IEDC during the period of delay and liquidated damages recovered or recoverable corresponding to the delay.

(4) If the delay in achieving the COD is not attributable to the generating company IDC and IEDC beyond SCOD may be allowed after prudence check and the liquidated damages, if any, recovered from the contractor or supplier or agency shall be adjusted in the capital cost of the generating station

(5) If the delay in achieving the COD is attributable either in entirety on in part to the generating company or its contractor or supplier or agency, in such cases, IDC and IEDC beyond SCOD may be disallowed after prudence check either in entirety or on pro-rata basis corresponding to the period of delay not condoned and the liquidated damages, if any, recovered from the contractor or supplier or agency shall be retained by the generating company

22. Controllable and Uncontrollable factors:

The following shall be considered as controllable and uncontrollable factors for deciding time over-run, cost escalation, IDC and IEDC of the project:

(1) The "controllable factors" shall include but shall not be limited to the following:

a. Efficiency in the implementation of the project not involving approved change in scope of such project, change in statutory levies or change in law or force majeure events; and

b. Delay in execution of the project on account of contractor or supplier or agency of the generating company.

(2) The "uncontrollable factors" shall include but shall not be limited to the following:

a. Force Majeure events;

b. Change in law; and

c. Land acquisition except where the delay is attributable to the generating company.

23. Initial Spares

Initial spares shall be capitalised as a percentage of the Plant and Machinery cost, subject to following ceiling norms:

(a) Coal-based/lignite-fired thermal generating stations - 4.0%

(b) Gas Turbine/Combined Cycle thermal generating stations- 4.0%

(c) Hydro generating stations including pumped storage hydro generating station - 4.0%

Provided that:

i. Plant and Machinery cost shall be considered as the original project cost excluding IDC, IEDC, Land Cost and Cost of Civil Works. The generating company for the purpose of estimating Plant and Machinery Cost, shall submit the break-up of head wise IDC and IEDC in its tariff application;

ii. Where the generating station has any transmission equipment forming part of the generation project, the ceiling norms for initial spares for such equipment shall be as per the ceiling norms specified for transmission system by the CERC.

CHAPTER-7

Computation of Additional Capital Expenditure

24. Additional Capitalisation within the original scope and up to the cut-off date:

(1) The additional capital expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

(a) Undischarged liabilities recognized to be payable at a future date;

(b) Works deferred for execution;

(c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;

(d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;

(e) Change in law or compliance of any existing law; and

(f) Force Majeure events:

Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.

(2) The generating company shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.

25. Additional Capitalisation within the original scope and after the cut-off date:

(1) The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:

(a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;

(b) Change in law or compliance of any existing law;

(c) Deferred works relating to ash pond or ash handling system in the original scope of work;

(d) Liability for works executed prior to the cut-off date;

(e) Force Majeure events;

(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and

(g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

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

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.

26. Additional Capitalisation beyond the original scope

(1) The capital expenditure, in respect of existing generating station, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:

(a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;

(b) Change in law or compliance of any existing law;

(c) Force Majeure events;

(d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;

(e) Deferred works relating to ash pond or ash handling system in additional to the original scope of work, on case to case basis

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;

(f) Usage of water from sewage treatment plant in thermal generating station

(2) In case of de-capitalisation of assets of a generating company the original cost of such asset as on the date of decapitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalised.

27. Additional Capitalisation on account of Renovation and Modernisation

(1) The generating company intending to undertake renovation and modernization (R&M) of the generating station or unit for the purpose of extension of life beyond the originally recognised useful life for the purpose of tariff, shall file a petition before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, and any other information considered to be relevant by the generating company.

Provided that the generating company making the applications for renovation and modernization (R&M) shall not be eligible for Special Allowance under Regulation 28 of these regulations;

Provided further that the generating company intending to undertake renovation and modernization (R&M) shall be required to obtain the consent of the beneficiaries for such renovation and modernization (R&M) and submit the same along with the petition.

(2) Where the generating company, makes an application for approval of its proposal for renovation and modernisation (R&M), approval may be granted after due consideration of reasonableness of the proposed cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, expected duration of life extension, consent of the beneficiaries, if obtained, and such other factors as may be considered relevant by the Commission.

(3) In case of gas/ liquid fuel based open/ combined cycle thermal generating station after 25 years of operation from date of commercial operation, any additional capital expenditure which has become necessary for renovation of gas turbines/steam turbine or additional capital expenditure necessary due to obsolescence or non-availability of spares for efficient operation of the stations shall be allowed:

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

(4) After completion of the renovation and modernisation (R&M), the generating company, shall file a petition for determination of tariff. Expenditure incurred or projected to be incurred and admitted by the Commission after prudence check, and after deducting the accumulated depreciation already recovered from the admitted project cost, shall form the basis for determination of tariff.

28. Special Allowance for Coal-based/Lignite fired Thermal Generating station

(1) In case of coal-based/lignite fired thermal generating stations, the generating company, instead of availing renovation and modernization (R&M) may opt to avail a 'special allowance' in accordance with the norms specified in this Regulation, as compensation for meeting the requirement of expenses including renovation and modernisation beyond the useful life of the generating station or a unit thereof and in such an event, upward revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the Special Allowance shall be included in the annual fixed cost:

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

Provided further that special allowance shall also be available for a generating station which has availed the Special Allowance during the tariff period 2009-14 or 2014-19 as applicable from the date of completion of the useful life.

(2) The Special Allowance admissible to a generating station shall be @ Rs 9.5 lakh per MW per year for the tariff period 2019-24.

(3) In the event of a generating station availing Special Allowance, the expenditure incurred upon or utilized from Special Allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission as and when directed.

(4) The Special Allowance allowed under this Regulation shall be transferred to a separate fund for utilization towards Renovation &Modernisation activities, for which detailed methodology shall be issued separately.

29. Additional Capitalization on account of Revised Emission Standards:

(1) A generating company requiring to incur additional capital expenditure in the existing generating station for compliance of the revised emissions standards shall share its proposal with the beneficiaries and file a petition for undertaking such additional capitalization.

(2) The proposal under clause (1) above shall contain details of proposed technology as specified by the Central Electricity Authority, scope of the work, phasing of expenditure, schedule of completion, estimated completion cost including foreign exchange component, if any, detailed computation of indicative impact on tariff to the beneficiaries, and any other information considered to be relevant by the generating company.

(3) Where the generating company makes an application for approval of additional capital expenditure on account of implementation of revised emission standards, the Commission may grant approval after due consideration of the reasonableness of the cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission

(4) After completion of the implementation of revised emission standards, the generating company shall file a petition for determination of tariff. Any expenditure incurred or projected to be incurred and admitted by the Commission after prudence check based on reasonableness of the cost and impact on operational parameters shall form the basis of determination of tariff.

CHAPTER-8

Computation of Annual Fixed Cost

30. Return on Equity:

(1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

(2) Return on equity shall be computed at the base rate of 15.00% for thermal generating station, and run-of river hydro generating station, and at the base rate of 15.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage:

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station. Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station is

found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the State LDC;

ii. In case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the State LDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

iii. in case of a thermal generating station,

a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

Provided that the detailed guidelines and date of effect in this regard shall be issued by State Load Dispatch Centre.

31. Tax on Return on Equity

(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation shall be excluded for the calculation of effective tax rate.

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

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

Where, "t" is the effective tax rate in accordance with clause (1) of this Regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation and the corresponding tax thereon. In case of generating company paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

Illustration-

(i) In case of a generating company paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess:

Rate of return on equity = 15.50/(1-0.2155) = 19.758%

(ii) (ii) In case of a generating company paying normal corporate tax including surcharge and cess:

(a) Estimated Gross Income from generation for FY 2019-20 is Rs 1,000 crore;

(b) Estimated Advance Tax for the year on above is Rs 240 crore;

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

(d) Rate of return on equity = 15.50/ (1-0.24) = 20.395%.

(3) The generating company shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries on year to year basis.

32. Interest on loan capital:

(1) The loans arrived at in the manner indicated in Regulation 18 of these Regulations shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalisation of such asset.

(4) Notwithstanding any moratorium period availed by the generating company the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized: Provided that if there is no actual loan for a particular year but

normative loan is still outstanding, the last available weighted average rate of interest shall be considered; Provided further that if the generating station does not have actual loan, then the weighted average rate of interest of the generating company whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

33. Depreciation

(1) Depreciation shall be computed from the date of commercial operation of a generating station. In case of the tariff of all the units of a generating station for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station taking into consideration the depreciation of individual units:

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station, weighted average life for the generating station shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable; Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:

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

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

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the assets of the generating station

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

(6) In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2019 from the gross depreciable value of the assets.

(7) The generating company shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

(8) In case of de-capitalization of assets in respect of generating station or unit, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.

34. Interest on Working Capital

(1) The working capital shall cover:

(a) For Coal-based/lignite-fired thermal generating stations:

(i) Cost of coal or lignite and limestone towards stock, if applicable, for 10 days for pit-head generating stations and 20 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;

(ii) Advance payment for 30 days towards cost of coal or lignite and limestone for generation corresponding to the normative annual plant availability factor;

(iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;

(iv) Maintenance spares @ 20% of operation and maintenance expenses including water charges and security expenses;

(v) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and

(vi) `Operation and maintenance expenses, including water charges and security expenses, for one month.

(b) For Open-cycle Gas Turbine/Combined Cycle thermal generating stations:

(i) Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;

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

(iii) Maintenance spares @ 30% of operation and maintenance expenses including water charges and security expenses;

(iv) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and

(v) Operation and maintenance expenses, including water charges and security expenses, for one month.

(c) For Hydro Generating Station including Pumped Storage Hydro Generating Station:

(i) Receivables equivalent to 45 days of annual fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and

(iii) Operation and maintenance expenses, including security expenses for one month.

(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this Regulation shall be based on the landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 38 of these regulations) by the generating station and gross calorific value of the fuel as per actual weighted average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined:

Provided that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 38 of these regulations) and gross calorific value of the fuel as per actual weighted average for three months, as used for infirm power, preceding date of commercial operation for which tariff is to be determined.

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system

including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.

(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken loan for working capital from any outside agency.

35. Operation and Maintenance Expenses:

(1) Thermal Generating Station: Normative Operation and Maintenance expenses of thermal generating stations shall be as follows:

(1) Coal based and lignite fired (including those based on Circulating Fluidized Bed Combustion (CFBC) technology) generating stations, other than the generating stations or units.

(in Rs Lakh/MW)

Year	200/210/250 MW Series	300/330/350 MW Series	500 MW Series	600 - 700 MW Series	800 MW Series and above
FY 2019-20	32.96	27.74	22.51	20.26	18.23
FY 2020-21	34.12	28.71	23.30	20.97	18.87
FY 2021-22	35.31	29.72	24.12	21.71	19.54
FY 2022-23	36.56	30.76	24.97	22.47	20.22
FY 2023-24	37.84	31.84	25.84	23.26	20.93

Provided that where the date of commercial operation of any additional unit(s)of a generating station after first four units occurs on or after 1.4.2019, the O&M expenses of such additional unit(s) shall be admissible at 90% of the operation and maintenance expenses as specified above;

(1) Open Cycle Gas Turbine/Combined Cycle generating stations Lignite-fired generating stations:

(in Rs Lakh/MW)

Year	Gas Turbine/Combined Cycle Generating stations other than small gas turbine power generating stations	Small gas turbine power generating stations	Agartala GPS	Advance F Class Machines
FY 2019-20	17.58	36.21	42.85	26.34
FY 2020-21	18.20	37.48	44.35	27.27
FY 2021-22	18.84	38.80	45.91	28.23
FY 2022-23	19.50	40.16	47.52	29.22
FY 2023-24	20.19	41.57	49.19	30.24

(2) Generating Stations based on coal rejects:

(in Rs Lakh/MW)

Year	O&M Expenses
FY 2019-20	31.15
FY 2020-21	32.24
FY 2021-22	33.37
FY 2022-23	34.54
FY 2023-24	35.76

(3) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately after prudence check:

Provided that water charges shall be allowed based on water consumption depending upon type of plant and type of cooling water system, subject to prudence check. The details regarding the same shall be furnished along with the petition;

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses;

Provided also that the generating station shall submit the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance as per Regulation 12.3 of Karnataka Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014 or Special Allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization.

(4) The additional operation and maintenance expenses on account of implementation of revised emission standards shall be notified separately:

Provided that till the norms are notified, the Commission shall decide the additional O&M expenses on case to case basis.

(2) Hydro Generating Station:

(a) Following operations and maintenance expense norms shall be applicable for hydro generating stations which have been operational for three or more years as on 1.4.2019:

Note: The impact in respect of revision of minimum wage, pay revision and GST, if any, will be considered at the time of determination of tariff.

(b) In case of the hydro generating stations declared under commercial operation on or after 1.4.2019, operation and maintenance expenses of first year shall be fixed at 3.5% and 5.0% of the original project cost (excluding cost of rehabilitation & resettlement works, IDC and IEDC) for stations with installed capacity exceeding 200 MW and for stations with installed capacity less than 200 MW, respectively.

(c) In case of hydro generating stations which have not completed a period of three years as on 1.4.2019, operation and maintenance expenses for 2019-20 shall be worked out by applying escalation rate of 4.77% on the applicable operation and maintenance expenses as on 31.3.2019. The operation and maintenance expenses for subsequent years of the tariff period shall be worked out by applying escalation rate of 4.77% per annum.

(d) The Security Expenses and Capital Spares for hydro generating stations shall be allowed separately after prudence check:

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification.

CHAPTER – 9

COMPUTATION OF INPUT PRICE OF COAL AND LIGNITE FROM INTEGRATED MINE

36. Input Price of coal and lignite for energy charges:

(1) Where the generating company has the arrangement for supply of coal or lignite from the integrated mine(s) allocated to it, for use in one or more of its generating stations as end use, the energy charge component of tariff of the generating station shall be determined based on the input price of coal or lignite, as the case may be, from such integrated mines computed in accordance with the regulations to be notified separately by the Commission.

(2) Till the regulation for computation of input price of coal is notified, the generating company shall continue to adopt the notified price of Coal India Limited commensurate with the grade of the coal from the integrated mine:

Provided that after notification of the regulation for input price of coal, the same shall be applicable from 1.4.2019 or the date of commercial operation of the integrated mine, whichever is later, and the difference between the input price of coal so decided and the input price of coal for quantity billed shall be adjusted in accordance with the regulations to be notified.

(3) Till the regulations for computation of input price of lignite is notified, the input price of lignite shall continue to be determined as per the guidelines specified by Ministry of Coal, Government of India.

CHAPTER-10

Components of Energy Charges

37. Energy Charge:

The energy charge in respect of the thermal generating Stations shall comprise of landed fuel cost of primary fuel, cost of secondary fuel oil consumption and landed cost of reagents on account of implementation of the revised emission standards.

38. Landed Fuel Cost of Primary Fuel:

The landed fuel cost of primary fuel for any month shall consist of base price or input price of fuel corresponding to the grade and quality of fuel and shall be inclusive of statutory charges as applicable, washery charges, transportation cost by rail or road or any other means and loading, unloading and handling charges:

Provided that procurement of fuel at a price other than Government notified prices may be considered, if it is based on competitive bidding through transparent process;

Provided further that landed fuel cost of primary fuel shall be worked out based on the actual bill paid by the generating company including any adjustment on account of quantity and quality;

Provided also that in case of coal-fired or lignite based thermal generating station, the Gross Calorific Value shall be measured by third party sampling and the expenses towards the third party sampling facility shall be reimbursed by the beneficiaries.

39. Transit and Handling Losses:

For coal and lignite, the transit and handling losses shall be as per the following norms:

Thermal Generating Station	Transit and Handling Loss(%)
Pit head	0.20%
Non-Pit head	0.80%

Provided that in case of pit-head stations, if coal or lignite is procured from sources other than the pit-head mines which is transported to the station through rail, transit and handling losses applicable for non-pit head station shall apply;

Provided further that in case of imported coal, the transit and handling losses applicable for pit-head station shall apply.

40. Gross Calorific Value of Primary Fuel

(1) The gross calorific value for computation of energy charges as per Regulation 42 of these regulations shall be done in accordance with 'GCV as received' basis.

The generating company shall provide to the beneficiaries of the generating station the details in respect of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc. as per the Form 15 prescribed at Annexure (Part I) to these regulations:

Provided that the additional details of the weighted average GCV of the fuel on as received basis used for generation during the period, blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall be provided, along with the bills of the respective month;

Provided further that copies of the bills and details of parameters of GCV and price of fuel such as domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel, details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company.

41. Landed Cost of Reagent

Where specific reagents such as Limestone,

Sodium Bi-Carbonate, Urea or Anhydrous Ammonia are used during operation of emission control system for meeting revised emission standards, the landed cost of such reagents shall be determined based on normative consumption and purchase price of the reagent through competitive bidding, applicable statutory charges and transportation cost.

The normative consumption of specific reagent for the various technologies installed for meeting revised emission standards shall be notified separately.

CHAPTER- 11

Computation of Capacity Charge and Energy Charges

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

(1) The fixed cost of a thermal generating station shall be computed on annual basis based on the norms specified under these regulations and recovered on monthly basis under capacity charge. The total capacity charge payable for a generating station shall be shared by its beneficiaries as per their respective percentage share or allocation in the capacity of the generating station. The capacity charge shall be recovered under two segments of the year, i.e. High Demand Season (period of three months) and Low Demand Season (period of remaining nine months), and within each season in two parts viz., Capacity Charge for Peak Hours of the month and Capacity Charge for Off- Peak Hours of the month as follows:

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

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

Capacity Charge for the Month (CCm) = Capacity Charge for Peak Hours of the Month (CCp) + Capacity Charge for Off-Peak Hours of the Month (CCop)

Where,

High demand Season:

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

CC_{p2} = $\{(0.20 \times AFC) \times \left(\frac{1}{6}\right) \times \left(\frac{PAFMp2}{NAPAF}\right)$ subject to ceiling of $(0.20 \times AFC) \times \left(\frac{1}{6}\right)\} - CCp1$

CC_{p3}= {(0.20 subject to ceiling of $(0.20\ xAFC)x\left(\frac{1}{4}\right)$}$-(CCp1+CCp2)$]]

C_{op1}= $\{(0.80\ xAFC)x\left(\frac{1}{12}\right)x\left(\frac{PAFMop1}{NAPAF}\right)$ subject to ceiling of $(0.80\ xAFC)x\left(\frac{1}{12}\right)\}$

CC_{op2} = { $(0.80\ xAFC)x\left(\frac{1}{6}\right)x\left(\frac{PAFMop2}{NAPAF}\right)$ subject to ceiling of $(0.80\ xAFC)x\left(\frac{1}{6}\right)\}-CCop1$

CC_{op3} = { $(0.80\ xAFC)x\left(\frac{1}{4}\right)x\left(\frac{PAFMop3}{NAPAF}\right)$ subject to ceiling of $(0.80\ xAFC)x\left(\frac{1}{4}\right)\}-(CCop1+CCop2)$

Low Demand Season:

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

CC_{p2}= $\{(0.20\ xAFC)x\left(\frac{1}{6}\right)x\left(\frac{PAFMp2}{NAPAF}\right)$ subject to ceiling of $(0.20\ xAFC)x\left(\frac{1}{6}\right)\}-CCp1$

CC_{p3}= $\{(0.20\ xAFC)x\left(\frac{1}{4}\right)x\left(\frac{PAFMp3}{NAPAF}\right)$ subject to ceiling of $(0.20\ xAFC)x\left(\frac{1}{4}\right)\}-(CCp1+CCp2)$

CC_{p4}= $\{(0.20\ xAFC)x\left(\frac{1}{3}\right)x\left(\frac{PAFMp4}{NAPAF}\right)$ subject to ceiling of $(0.20\ xAFC)x\left(\frac{1}{3}\right)\}-(CCp1+CCp2+CCp3)$

CC_{p5}= $\{(0.20\left(\frac{PAFMp5}{NAPAF}\right)$ subject to ceiling of $(0.20\ xAFC)x\left(\frac{5}{12}\right)\}-(CCp1+CCp2+CCp3+CCp4)$

CC_{p6} = $\{(0.20\ xAFC)x\left(\frac{1}{2}\right)x\left(\frac{PAFMp6}{NAPAF}\right)$ subject to ceiling of $(0.20\ xAFC)x\left(\frac{1}{2}\right)\}-(CCp1+CCp2+CCp3+CCp4+CCp5)$

CC_{p7} = $\{(0.20\ xAFC)x\left(\frac{7}{12}\right)x\left(\frac{PAFMp7}{NAPAF}\right)$ subject to ceiling of $(0.20\ xAFC)x\left(\frac{7}{12}\right)\}-(CCp1+CCp2+CCp3+CCp4+CCp5+CCp6)$

CC_{p8}= $\{(0.20\ xAFC)x\left(\frac{2}{3}\right)x\left(\frac{PAFMp8}{NAPAF}\right)$ subject to ceiling of $(0.20\ xAFC)x\left(\frac{2}{3}\right)\}-(CCp1+CCp2+CCp3+CCp4+CCp5+CCp6+CCp7)$

CC_{p9} = $\{(0.20\ xAFC)x\left(\frac{3}{4}\right)x\left(\frac{PAFMp9}{NAPAF}\right)$ subject to ceiling of $(0.20\ xAFC)x\left(\frac{3}{4}\right)\}-(CCp1+CCp2+CCp3+CCp4+CCp5+CCp6+CCp7+CCp8)$

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

CC_{op2} = { $(0.80\ xAFC)x\left(\frac{1}{6}\right)x\left(\frac{PAFMop2}{NAPAF}\right)$ $(0.80\ xAFC)x\left(\frac{1}{6}\right)\}-CCop1$

CC_{op3} = $\{(0.80 \times AFC) \times \left(\frac{1}{4}\right) \times \left(\frac{PAFMop3}{NAPAF}\right)$ subject to ceiling of $(0.80 \times AFC) \times \left(\frac{1}{4}\right)\} - (CCop1 + CCop2)$

CC_{op4} = $\{(0.80 \times AFC) \times \left(\frac{1}{3}\right) \times \left(\frac{PAFMop4}{NAPAF}\right)$ subject to ceiling of $(0.80 \times AFC) \times \left(\frac{1}{3}\right)\} - (CCop1 + CCop2 + CCop3)$

CC_{op5}= $(0.80 \times AFC) \times \left(\frac{5}{12}\right) \times \left(\frac{PAFMop5}{NAPAF}\right)$ subject to ceiling of $(0.80 \times AFC) \times \left(\frac{5}{12}\right)\} - (CCop1 + CCop2 + CCop3 + CCop4)$

CC_{op6} = $\{(0.80 \times AFC) \times \left(\frac{1}{2}\right) \times \left(\frac{PAFMop6}{NAPAF}\right)$ subject to ceiling of $(0.80 \times AFC) \times \left(\frac{1}{2}\right)\} - (CCop1 + CCop2 + CCop3 + CCop4 + CCop5)$

CC_{op7}= $\{(0.80 \times AFC) \times \left(\frac{7}{12}\right) \times \left(\frac{PAFMop7}{NAPAF}\right)$ subject to ceiling of $(0.80 \times AFC) \times \left(\frac{7}{12}\right)\} - (CCop1 + CCop2 + CCop3 + CCop4 + CCop5 + CCop6)$

CC_{op8} = $\{(0.80 \times AFC) \times \left(\frac{2}{3}\right) \times \left(\frac{PAFMop8}{NAPAF}\right)$ subject to ceiling of $(0.80 \times AFC) \times \left(\frac{2}{3}\right)\} - (CCop1 + CCop2 + CCop3 + CCop4 + CCop5 + CCop6 + CCop7)$

CC_{op9} = $\{(0.80 \times AFC) \times \left(\frac{3}{4}\right) \times \left(\frac{PAFMop9}{NAPAF}\right)$ subject to ceiling of $(0.80 \times AFC) \times \left(\frac{3}{4}\right)\} - (CCop1 + CCop2 + CCop3 + CCop4 + CCop5 + CCop6 + CCop7 + CCop8)$

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

Where,

CCm= Capacity Charge for the Month;

CCp= Capacity Charge for the Peak Hours of the Month;

CCop= Capacity Charge for the Off-Peak Hours of the Month;

CCpn= Capacity Charge for the Peak Hours of nth Month in a specific Season;

CCopn= Capacity Charge for the Off-Peak of nth Month in a specific Season;

AFC = Annual Fixed Cost;

PAFMpn = Plant Availability Factor achieved during Peak Hours upto the end of nth Month in a Season;

PAFMopn = Plant Availability Factor achieved during Off-Peak Hours upto the end of nth Month in a Season;

NAPAF= Normative Annual Plant Availability Factor.

(3) Normative Plant Availability Factor for "Peak" and "Off-Peak" Hours in a month shall be equivalent to the NAPAF specified in Clause (A) of Regulation 47 of these regulations. The number of hours of "Peak" and "Off-Peak" periods during a day shall be four and twenty respectively. The hours of Peak and Off-Peak periods during a day shall be declared by the SLDC at least a week in advance. The High Demand Season (period of three months, consecutive or otherwise) and Low Demand Season (period of remaining nine months, consecutive or otherwise) in a State shall be declared by the concerned SLDC, at least six months in advance:

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

Provided further that in respect of a generating station having beneficiaries across different regions, the High Demand Season and the Peak Hours shall correspond to the High Demand Season and Peak Hours of the region in which majority of its beneficiaries, in terms of percentage of allocation of share, are located.

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

Provided that within a Season, the shortfall in recovery of Capacity Charge for cumulative Off-Peak Hours derived based on NAPAF, shall be allowed to be off-set by over-achievement of PAF, if any, and consequent notional over-recovery of Capacity Charge for cumulative Peak Hours in that Season:

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

(5) The Plant Availability Factor achieved for a Month (PAFM) shall be computed in accordance with the following formula:

$$\sum_{N} DC_i \quad \%$$

$$PAFM = 10000 \times \sum_{i=1} [N \times IC \times (100\text{-}Aux)]$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

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

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

N = Number of days during the period

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

(6) In addition to the capacity charge, an incentive shall be payable to a generating station or unit thereof @ 65 paise/ kWh for ex-bus scheduled energy during Peak Hours and @ 50 paise/ kWh for ex-bus scheduled energy during Off-Peak Hours corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) achieved on a cumulative basis within each Season (High Demand Season or Low Demand Season, as the case may be), as specified in Clause (B) of Regulation 47 of these regulations.

(7) The provisions under Clauses (1) to (6) of this Regulation shall come into force with effect from 1.4.2020. Till that date, the capacity charge for a thermal generating station determined under these regulations shall be recovered in accordance with the provisions contained in the Regulation 21 of the Karnataka Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014, subject to the condition that the NAPAF and NAPLF shall be taken as specified under these regulations.

43. Computation and Payment of Energy Charge for Thermal Generating Stations

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

Energy Charges = (Energy charge rate in Rs./kWh) x {Scheduled energy (exbus) for the month in kWh}

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

(a) **For coal based and lignite fired stations**:

ECR = {(SHR – SFC x CVSF) x LPPF / (CVPF + SFC x LPSFi + LC x LPL} x 100 /(100 – AUX)

(b) **For gas and liquid fuel based stations:**

ECR = SHR x LPPF x 100 / {(CVPF) x (100 – AUX)}

Where,

AUX =Normative auxiliary energy consumption in percentage.

CVPF = (a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations less 85 Kcal/Kg on account of variation during storage at generating station;

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

(c) In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio: CVSF = Calorific value of secondary fuel, in kCal per ml;

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

SHR = Gross station heat rate, in kCal per kWh;

LC = Normative limestone consumption in kg per kWh;

LPL = Weighted average landed cost of limestone in Rupees per kg;

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

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

LPSFi = Weighted Average Landed Fuel Cost of Secondary Fuel in Rs./ml during the month:

Provided that energy charge rate for a gas or liquid fuel based station shall be adjusted for open cycle operation based on certification of SLDC during the month.

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

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

Provided further that the weighted average price of alternative source of fuel shall not exceed 30% of base price of fuel computed as per clause (5) of this Regulation:

Provided also that where the energy charge rate based on weighted average price of fuel upon use of alternative source of fuel supply exceeds 30% of base energy charge rate as approved by the Commission for that year or exceeds 20% of energy charge rate for the previous month, whichever is lower shall be considered and in that event, prior consultation with beneficiary shall be made at least three days in advance.

(4) Where biomass fuel is used for blending with coal, the landed cost of biomass fuel shall be worked out based on the delivered cost of biomass at the unloading point of the generating station, inclusive of taxes and duties as applicable. The energy charge rate of the blended fuel shall be worked out considering consumption of biomass based on blending ratio as specified by Authority or actual consumption of biomass, whichever is lower.

(5) The Commission through specific tariff orders to be issued for each generating station shall approve the energy charge rate at the start of the tariff period. The energy charge rate so approved shall be the base energy charge rate for the first year of the tariff period. The base energy charge rate for subsequent years shall be the energy charge computed after escalating the base energy charge rate by escalation rates for payment purposes as notified by the CERC from time to time under competitive bidding guidelines.

44. Computation and Payment of Capacity Charge and Energy Charge for Hydro Generating Stations:

(1) The fixed cost of a hydro generating station shall be computed on annual basis, based on norms specified under these regulations, and shall be recovered on monthly basis under capacity charge (inclusive of incentive) and energy charge, which shall be payable by the beneficiaries in proportion to their respective allocation in the saleable capacity of the generating station, i.e., in the capacity excluding the free Power to the State.

Provided that during the period between the date of commercial operation of the first unit of the generating station and the date of commercial operation of the generating station, the annual fixed cost shall provisionally be worked out based on the latest estimate of the completion cost for the generating station, for the purpose of determining the capacity charge and energy charge payment during such period.

(2) The capacity charge (inclusive of incentive) payable to a hydro generating station for a calendar month shall be:

AFC x 0.5 x NDM / NDY x (PAFM / NAPAF) (in Rupees) Where,

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

NAPAF = Normative plant availability factor in percentage;

NDM = Number of days in the month

NDY = Number of days in the year

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

(3) The PAFM shall be computed in accordance with the following formula:

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

AUX = Normative auxiliary energy consumption in percentage

DCi = Declared capacity (in ex-bus MW) for the ith day of the month which the station can deliver for at least three (3) hours, as certified by the State load dispatch centre after the day is over.

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

N = Number of days in the month

(4) The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary, excluding free energy, if any, during the calendar month, on ex-bus basis, at the computed energy charge rate. Total energy charge payable to the generating company for a month shall be:

Energy Charges = (Energy charge rate in Rs. / kWh) x {Scheduled energy (ex-bus) for the month in kWh} x (100 – FES) / 100

(5) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis, for a hydro generating station, shall be determined up to three decimal places based on the following formula, subject to the provisions of clause (7) of this Regulation:

ECR = AFC x 0.5 x 10 / {DE x (100 – AUX) x (100 – FES)}

Where,

DE = Annual design energy specified for the hydro generating station, in MWh, subject to the provision in clause (6) below.

FES = Free energy for State, in per cent, as mentioned in Note 3 under Regulation 51 of these regulations.

(6) In case the saleable scheduled energy (ex-bus) of a hydro generating station during a year is less than the saleable design energy (ex-bus) for reasons beyond the control of the generating station, the treatment shall be as per clause (7) of this Regulation, on an application filed by the generating company.

(7) Shortfall in energy charges in comparison to fifty percent of the annual fixed cost shall be allowed to be recovered in six equal monthly instalments:

Provided that in case actual generation from a hydro generating station is less than the design energy for a continuous period of four years on account of hydrology

factor, the generating station shall approach the Central Electricity Authority with relevant hydrology data for revision of design energy of the station.

(8) Any shortfall in the energy charges on account of saleable scheduled energy (ex-bus) being less than the saleable design energy (ex-bus) during the tariff period 2014-19 which was beyond the control of the generating station and which could not be recovered during the said tariff period shall be recovered in accordance with clause (7) of this Regulation.

(9) In case the energy charge rate (ECR) for a hydro generating station, computed as per clause (5) of this Regulation exceeds one hundred and twenty paise per kWh, and the actual saleable energy in a year exceeds {DE x (100 – AUX) x (100 – FES) /10000} MWh, the energy charge for the energy in excess of the above shall be billed at one hundred and twenty paise per kWh only.

45. Computation and Payment of Capacity Charge and Energy Charge for Pumped Storage Hydro Generating Stations

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

Provided that during the period between the date of commercial operation of the first unit of the generating station and the date of commercial operation of the generating station, the annual fixed cost shall be worked out based on the latest estimate of the completion cost for the generating station, for the purpose of determining the capacity charge payment during such period.

(2) The capacity charge payable to a pumped storage hydro generating station for a calendar month shall be:

(AFC x NDM / NDY) (In Rupees), if actual Generation during the month is >= 75 % of the Pumping Energy consumed by the station during the month and

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

Where,

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

NDM = Number of days in the month

NDY = Number of days in the year

Provided that there would be adjustment at the end of the year based on actual generation and actual pumping energy consumed by the station during the year.

(3) The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary in excess of the design energy plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir, at a flat rate equal to the average energy charge rate of 20 paise per kWh, excluding free energy, if any, during the calendar month, on ex power plant basis.

(4) Energy charge payable to the generating company for a month shall be:

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

Where,

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

FES = Free energy for State, in per cent, as mentioned in Note 3 under Regulation 52 of these regulations, if any.

Provided that in case the Scheduled energy in a month is less than the Design Energy for the month plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month, then the energy charges payable by the beneficiaries shall be zero.

(5) The generating company shall maintain the record of daily inflows of natural water into the upper elevation reservoir and the reservoir levels of upper elevation reservoir and lower elevation reservoir on hourly basis. The generator shall be required to maximize the peak hour supplies with the available water including the natural flow of water. In case it is established that generator is deliberately or otherwise without any valid reason, is not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power to its potential or wasting natural flow of water, the capacity charges of the day shall not be payable by the beneficiary. For this purpose, outages of the unit(s)/station including planned outages and the forced outages up to 15% in a year shall be construed as the valid reason for not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power using energy of pumped water or natural flow of water:

Provided that the total capacity charges recovered during the year shall be adjusted on pro-rata basis in the following manner in the event of total machine outages in a year exceeds 15%:

(ACC)adj = (ACC) R x (100- ATO)/85

Where,

(ACC)adj = Adjusted Annual Capacity Charges

(ACC) R = Annual Capacity Charges recovered

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

Provided further that the generating station shall be required to declare its machine availability daily on day ahead basis for all the time blocks of the day in line with the scheduling procedure of Grid Code.

(6) The State Load Despatch Centre shall finalise the schedules for the hydro generating stations, in consultation with the beneficiaries, for optimal utilization of all the energy declared to be available, which shall be scheduled for all beneficiaries in proportion to their respective allocations in the generating station.

46. Deviation Charges

(1) Variations between actual net injection and scheduled net injection for the generating stations, and variations between actual net drawal and scheduled net drawal for the beneficiaries shall be treated as their respective deviations and charges for such deviations shall be governed by the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2014, as amended from time to time or any subsequent re-enactment thereof, till such time a separate mechanism evolved.

(2) Actual net deviation of every Generating Station and Beneficiary shall be metered on its periphery through special energy meters (SEMs) installed by the State Transmission Utility (STU), and computed in MWh for each 15-minute time block by the State Load Despatch Centre (SLDC).

CHAPTER-12

Norms of Operation

47. Recovery of Tariff and Incentive

(1) Recovery of capacity charge, energy charge, and incentive by the generating company shall be based on the achievement of the operational norms specified in the Regulation 47 to Regulation 48 of these regulations

(2) The Commission may on its own revise the norms of Station Heat Rate specified in Regulation 47 (C) of these regulations in respect of any of the generating stations for which relaxed norms have been specified.

48. Norms of operation for thermal generating station

The norms of operation as given hereunder shall apply to thermal generating stations:

(A) Normative Annual Plant Availability Factor (NAPAF)

(a) For all thermal generating stations, except those covered under clauses (b) 85%;

(b) For Lignite fired Generating Stations using Circulatory Fluidized Bed Combustion (CFBC) Technology and Generating stations based on coal rejects:

1. First Three years from the date of commercial operation – 75%
2. For next year after completion of three years of the date of commercial operation – 80%

(B) Normative Annual Plant Load Factor (NAPLF) for Incentive:

For all thermal generating stations 85%;

(C) Gross Station Heat Rate:

(a) Thermal Generating Stations achieving COD before 1.4.2009

(i) For Coal-based Thermal Generating Stations, other than those covered under clause (ii) below:

200/210/250 MW Sets	500 MW Sets (Sub-critical)
2,430kCal/kWh	2,390kCal/kWh

Note-1:- In respect of 500 MW and above units where the boiler feed pumps are electrically operated, the gross station heat rate shall be 40 kCal/kWh lower than the gross station heat rate specified above;

Note-2:- For the generating stations having combination of 200/210/250 MW sets and 500 MW and above sets, the normative gross station heat rate shall be the weighted average gross station heat rate of the combinations

Note 3:- The normative gross station heat rate above is exclusive of the compensation specified in the Grid Code. The generating company shall, based on unit loading factor, consider the compensation in addition to the normative gross heat rate above.

Note-4:- The gross station heat rate for the unit capacity of less than 200 MW sets, shall be dealt on case to case basis.

(iii) Following Thermal generating stations of Karnataka Power Corporation Limited:

Name of the Station	Proposed heat rate for 2019-24
210 MW each of RTPS Units 1 to 7	2430 kcal/kwh or actuals
250 MW RTPS Unit 8	2273 kcal/kwh or actuals
500 MW, BTPS Unit-1	2390 kcal/kwh or actuals
500 MW, BTPS Unit-2	2267 kcal/kwh or actuals
700 MW BTPS Unit-3	2176.65 kcal/kwh or actuals
1600 MW YTPS 1 & 2	2151 kcal/kwh or actuals

(b) Thermal Generating Stations achieving COD on or after 1.4.2009:

(i) For Coal-based and lignite-fired Thermal Generating Stations:

1.05 X Design Heat Rate (kCal/kWh)

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

Provided that the design heat rate shall not exceed the following maximum design unit heat rates depending upon the pressure and temperature ratings of the units:

Pressure Rating (Kg/cm2)	150	170	170
SHT/RHT (0C)	535/535	537/537	537/565
Type of BFP	Electrical Driven	Turbine Driven	Turbine Driven
Max Turbine Heat Rate (kCal/kWh)	1955	1950	1935
Min. Boiler Efficiency			
Sub-Bituminous Indian Coal	0.86	0.86	0.86
Bituminous Imported Coal	0.89	0.89	0.89
Max. Design Heat Rate (kCal/kWh)			
Sub-Bituminous Indian Coal	2273	2267	2250
Bituminous Imported Coal	2197	2191	2174

Pressure Rating (Kg/cm2)	247	247	270	270
SHT/RHT (0C)	535/565	565/593	593/593	600/600
Type of BFP	Turbine Driven	Turbine Driven	Turbine Driven	Turbine Driven
Max Turbine Heat Rate (kCal/kWh)	1900	1850	1810	1800
Min. Boiler Efficiency				
Sub-Bituminous Indian Coal	0.86	0.86	0.865	0.865
Bituminous Imported Coal	0.89	0.89	0.895	0.895
Max. Design Heat Rate (kCal/kWh)				

Sub-Bituminous Indian Coal	2222	2151	2105	2081
Bituminous Imported Coal	2135	2078	2034	2022

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

Provided also that where heat rate of the unit has not been guaranteed but turbine cycle heat rate and boiler efficiency are guaranteed separately by the same supplier or different suppliers, the design heat rate of the unit shall be arrived at by using guaranteed turbine cycle heat rate and boiler efficiency:

Provided also that where the boiler efficiency is lower than 86% for Subbituminous Indian coal and 89% for bituminous imported coal, the same shall be considered as 86% and 89% for Sub-Bituminous Indian coal and bituminous imported coal respectively, for computation of station heat rate:

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

Provided also that in case of coal based generating station if one or more generating units were declared under commercial operation prior to 1.4.2019, the heat rate norms for those generating units as well as generating units declared under commercial operation on or after 1.4.2019 shall be lowest of the heat rate norms considered by the Commission during tariff period 2014-19 or those arrived at by above methodology or the norms as per the sub-clause (C)(a)(i) of this Regulation:

Provided also that in case of lignite-fired generating stations (including stations based on CFBC technology), maximum design heat rates shall be increased using factor for moisture content given in sub-clause (C)(a)(iv) of this Regulation:

Provided also that for Generating stations based on coal rejects, the Commission shall approve the Station Heat Rate on case to case basis.

Note: In respect of generating units where the boiler feed pumps are electrically operated, the maximum design heat rate of the unit shall be 40 kCal/kWh lower than the maximum design heat rate of the unit specified above with turbine driven Boiler Feed Pump.

(c) For Gas-based/ Liquid-based Thermal Generating Unit(s)/ Block(s) having COD on or after 1.4.2009:

For Natural Gas and RLNG = 1.050 X Design Heat Rate of the unit/block (kCal/kWh)

For Liquid fuel =1.071 X Design Heat Rate of the unit/block for Liquid Fuel (kCal/kWh)

Where the Design Heat Rate of a unit shall mean the guaranteed heat rate for a unit at 100% MCR and at site ambient conditions; and the Design Heat Rate of a block

shall mean the guaranteed heat rate for a block at 100% MCR, site ambient conditions, zero percent make up, design cooling water temperature/back pressure.

(D) Secondary Fuel Oil Consumption:

(a) For Coal-based generating stations: 0.50 ml/kWh

(b) For Generating Stations based on Coal Rejects: 2.0 ml/kWh

(E) Auxiliary Energy Consumption:

(a) For Coal-based generating stations except at (b) below:

S. No.	Generating Station	with Natural Draft cooling tower or without cooling tower
(i)	200 MW series	8.50%
(ii)	300 MW and above	
	Steam driven boiler feed pumps	5.75%
	Electrically driven boiler feed pumps	8.00%

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

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

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

Note: The auxiliary energy consumption for the unit capacity of less than 200 MW sets shall be dealt on case to case basis.

(b) For Gas Turbine /Combined Cycle generating stations:

(i) Combined Cycle: 2.75%

(ii) Open Cycle: 1.00%

Provided that where the gas based generating station is using electric motor driven Gas Booster Compressor, the Auxiliary Energy Consumption in case of Combine 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 Combine Cycle Generating Stations having direct cooling air cooled condensers with mechanical draft fans.

(c) For Lignite-fired thermal generating stations:

(i) For all generating stations with 200 MW sets and above:

The auxiliary energy consumption norms shall be 0.5 percentage point more than the auxiliary energy consumption norms of coal-based generating stations at (E) (a) above.

Provided that for the lignite fired stations using CFBC technology, the auxiliary energy consumption norms shall be 1.5 percentage point more than the auxiliary energy consumption norms of coal-based generating stations at (E) (a) above.

(ii) For Generating Stations based on coal rejects: 10%

49. Norms of Operation for Hydro Generating Stations

(A) (1) Normative Annual Plant Availability Factor (NAPAF): (1) The following normative annual plant availability factor (NAPAF) shall apply to hydro generating station:

(a) Storage and Pondage type plants with head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) of up to 8%, and where plant availability is not affected by silt: 90%;

(b) In case of storage and pondage type plants with head variation between full reservoir level and minimum draw down level is more than 8% and when plant availability is not affected by silt, the month wise peaking capability as provided by the project authorities in the DPR (approved by CEA or the State Government) shall form basis of fixation of NAPAF;

(c) Pondage type plants where plant availability is significantly affected by silt: 85%.

(d) Run-of-river generating stations: NAPAF to be determined plant-wise, based on 10-day design energy data, moderated by past experience where available/relevant.

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

(B) In case of pumped storage hydro generating stations, the quantum of electricity required for pumping water from down-stream reservoir to up-stream reservoir shall be arranged by the beneficiaries duly taking into account the transmission and distribution losses up to the bus bar of the generating station. In return, beneficiaries shall be entitled to equivalent energy of 75% of the energy utilized in pumping the water from

the lower elevation reservoir to the higher elevation reservoir from the generating station during peak hours and the generating station shall be under obligation to supply such quantum of electricity during peak hours:

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

Provided further that the beneficiaries may assign or surrender their share of capacity in the generating station, in part or in full, or the capacity may be reallocated by the State Government, and in that event, the owner or assignee of the capacity share shall be responsible for arranging the equivalent energy to the generating station in off-peak hours, and be entitled to corresponding energy during peak hours in the same way as the original beneficiary was entitled.

C) Auxiliary Energy Consumption (AEC):

Type of Station	AEC	
	Installed Capacity above 200 MW	Installed Capacity up to 200 MW
Surface		
Rotating Excitation	0.7%	0.7%
Static	1.0%	1.2%
Underground		
Rotating Excitation	0.9%	0.9%
Static	1.2%	1.3%

CHAPTER-13

Scheduling Accounting Billing

50. Scheduling:

The methodology for scheduling and dispatch for the generating station shall be as specified in the Grid Code.

51. Metering and accounting

The provisions of the Grid Code shall be applicable.

52. Billing and Payment of charges

(1) Bills shall be raised for capacity charge and energy charge by the generating company on monthly basis in accordance with these regulations, and payments shall be made by the beneficiaries to the generating company.

Provided that the physical copy of the Bill in Original at the office of the Authorised Person of the beneficiary or the scanned copy of Original Bill through official email ID of the Authorised Signatory of the Generating Company shall be recognized as valid mode of presentation of Bill:

Provided further that Authorized Signatory or Signatories (official designation only) shall be notified in advance by the Managing Director or Chief Executive Officer of the Company and any change in the list of Authorised Signatory for the purpose, shall be communicated in the same manner.

(2) Payment of the capacity charge for a thermal generating station shall be shared by the beneficiaries of the generating station as per their percentage shares for the month (inclusive of any allocation out of the unallocated capacity) in the installed capacity of the generating station. Payment of capacity charge and energy charge for a hydro generating station shall be shared by the beneficiaries of the generating station in proportion to their shares (inclusive of any allocation out of the unallocated capacity) in the saleable capacity (to be determined after deducting the capacity corresponding to free energy allocated by State as per Note 3 herein.

Note-1:-

Shares or allocations of each beneficiary in the total capacity of State generating stations shall be as determined by the State Government, inclusive of any allocation made out of the unallocated capacity. The shares shall be applied in percentages of installed capacity and shall normally remain constant during a month. Based on the decision of the State Government, the changes in allocation shall be communicated by the SLDC in advance, at least three days prior to beginning of a calendar month, except in case of an emergency calling for an urgent change in allocations out of unallocated capacity. The total capacity share of a beneficiary would be sum of its capacity share plus allocation out of the unallocated portion. In the absence of any

specific allocation of unallocated power by the State Government, the unallocated power shall be added to the allocated shares in the same proportion as the allocated shares.

Note-3:- Free Energy For State, in percent and shall be taken as 13% or actual whichever is less.

53. Recovery of Statutory Charges

The generating company shall recover the statutory charges imposed by the State and Central Government such as electricity duty, water cess by considering normative parameters specified in these regulations. In case of the electricity duty is applied on the auxiliary energy consumption, such amount of electricity duty shall apply on normative auxiliary energy consumption of the generating station (excluding colony consumption) and apportioned to each of the beneficiaries in proportion to their schedule dispatch during the month.

54. Rebate

(1) For payment of bills of the generating company through letter of credit on presentation or through National Electronic Fund Transfer (NEFT) or Real Time Gross Settlement (RTGS) payment mode within a period of 5 days of presentation of bills by the generating company or the transmission licensee, a rebate of 1.50% shall be allowed.

Explanation: In case of computation of '5 days', the number of days shall be counted consecutively without considering any holiday. However, in case the last day or 5th day is official holiday, the 5th day for the purpose of Rebate shall be construed as the immediate succeeding working day (as per the official State Government's calendar, where the Office of the Authorised Signatory or Representative of the Beneficiary, for the purpose of receipt or acknowledgement of Bill is situated).

(2) Where payments are made on any day after 5 days and within a period of 30 days of presentation of bills by the generating company a rebate of 1% shall be allowed.

55. Late payment surcharge:

In case the payment of any bill for charges payable under these regulations is delayed by a beneficiary, beyond a period of 45 days from the date of presentation of bills, a late payment surcharge at the rate of 1.50% per month shall be levied by the generating Company.

CHAPTER – 14

SHARING OF BENEFITS

56. Sharing of gains due to variation in norms:

(1) The generating company shall workout gains based on the actual performance of applicable Controllable parameters as under:

i) Station Heat Rate;

ii) Secondary Fuel Oil Consumption; and

iii) Auxiliary Energy Consumption.

(2) The financial gains by the generating company, on account of controllable parameters shall be shared between generating company and the beneficiaries on annual basis. The financial gains computed as per the following formulae in case of generating station other than hydro generating stations on account of operational parameters as shown in Clause (1) of this Regulation shall be shared in the ratio of 50:50 between the generating stations and beneficiaries.

Net Gain = (ECRN– ECRA) x Scheduled Generation

Where,

ECRN = Normative Energy Charge Rate computed on the basis of norms specified for Station Heat Rate,

Auxiliary Energy Consumption and Secondary Fuel Oil consumption.

ECRA = Actual Energy Charge Rate computed on the basis of actual Station Heat Rate, Auxiliary Energy Consumption and Secondary Fuel Oil Consumption for the month.

Provided that in case of hydro generating stations, the net gain on account of Actual Auxiliary Energy Consumption being less than the Normative Auxiliary Energy Consumption, shall be computed as per following formulae provided the saleable scheduled generation is more than the saleable design energy and shall be shared in the ratio of 50:50 between generating station and beneficiaries.:

(i) When saleable scheduled generation is more than saleable design energy on the basis of normative auxiliary energy consumption and less than or equal to saleable design energy on the basis of actual auxiliary energy consumption: Net gain (Million Rupees) = [(Saleable Scheduled generation in MUs) – (Saleable Design energy on the basis of normative auxiliary energy consumption in MUs)] x [1.20 or ECR, whichever is lower]

(ii) When saleable scheduled generation is more than saleable design energy on the basis of actual auxiliary energy consumption:

Net gain (Million Rupees) = {Saleable Scheduled generation in MUs-[(Saleable Scheduled Generation in MUs x (100-normative AEC in %)/ (100-actual AEC in %)]}x [1.20 or ECR, whichever is lower]

57. Sharing of saving in interest due to re-financing or restructuring of loan:

(1) If re-financing or restructuring of loan by the generating company, results in net savings on interest after accounting for cost associated with such refinancing or restructuring, the same shall be shared between the beneficiaries and the generating company, in the ratio of 50:50.

(2) In case of dispute, any of the parties may make an application in accordance with the KERC (General & Conduct of Proceedings) Regulations, 2000 for settlement of the dispute:

Provided that the beneficiaries or the long term customers shall not withhold any payment on account of the interest claimed by the generating company during the pendency of any dispute arising out of re-financing of loan.

58. Sharing of Non-Tariff Income:

The non-tariff net income in case of generating station and transmission system from rent of land or buildings, sale of scrap and advertisements shall be shared between the beneficiaries or the long term customers and the generating company, in the ratio 50:50.

59. Sharing of Clean Development Mechanism Benefits:

The proceeds of carbon credit from approved emission reduction projects under Clean Development Mechanism shall be shared in the following manner: -

(a) 100% of the gross proceeds on account of CDM to be retained by the project developer in the first year after the date of commercial operation of the generating station;

(b) In the second year, the share of the beneficiaries shall be 10% which shall be progressively increased by 10% every year till it reaches 50%, where after the proceeds shall be shared in equal proportion, by the generating company and the beneficiaries.

CHAPTER-14

Miscellaneous Provisions

60. Operational Norms to be ceiling norms:

Operational norms specified in these regulations are the ceiling norms and shall not preclude the generating company and the beneficiaries' customers from agreeing to the improved norms and in case the improved norms are agreed to, such improved norms shall be applicable for determination of tariff.

61. Deviation from ceiling tariff:

(1) The tariff determined in these regulations shall be a ceiling tariff. The generating company and the beneficiaries may mutually agree to charge a lower tariff.

(2) The generating company, may opt to charge a lower tariff for a period not exceeding the validity of these regulations on agreeing to deviation from operational parameters,

reduction in operation and maintenance expenses, reduced return on equity and incentive specified in these regulations

(3) If the generating company opts to charge a lower tariff for a period not exceeding the validity of these regulations on account of lower depreciation based on the requirement of repayment in such case the unrecovered depreciation on account of reduction of depreciation by the generating company during useful life shall be allowed to be recovered after the useful life in these regulations.

(4) The deviation from the ceiling tariff specified by the Commission, shall come into effect from the date agreed to by the generating company

(5) The generating company and the beneficiaries of a generating station shall be required to approach the Commission for charging lower tariff in accordance with clauses (1) to (3) above. The details of the accounts and the tariff actually charged under clauses (1) to (3) shall be submitted at the time of true up.

62. Deferred Tax liability with respect to previous tariff period

Deferred tax liabilities for the period upto 31st March, 2009 whenever they materialise shall be recoverable directly by the generating companies as the case may be. Deferred tax liabilities for the period arising from 1.4.2009 to 31.3.2014 if any, shall not be recoverable from the beneficiaries.

63. Hedging of Foreign Exchange Rate Variation:

(1) The generating company hedge foreign exchange exposure in respect of the interest and repayment of foreign currency loan taken for the generating station, in part or in full at their discretion

(2) If the petitioner enters into hedging arrangement(s) based on its approved hedging policy, the petitioner shall communicate to the beneficiaries concerned, of entering into such arrangement(s) within thirty days.

(3) Every generating company shall recover the cost of hedging of foreign exchange rate variation corresponding to the normative foreign debt, in the relevant year on year-to-year basis as expense in the period in which it arises and extra rupee liability corresponding to such foreign exchange rate variation shall not be allowed against the hedged foreign debt.

(4) To the extent the generating company is not able to hedge the foreign exchange exposure, the extra rupee liability towards interest payment and loan repayment corresponding to the normative foreign currency loan in the relevant year shall be permissible, provided it is not attributable to the generating company

64. Recovery of cost of hedging or Foreign Exchange Rate Variation (FERV):

(1) Every generating company rate variation on year-to-year basis as income or expense in the period in which it arises.

(2) Recovery of cost of hedging or foreign exchange rate variation shall be made directly by the generating company without making any application before the Commission:

Provided that in case of any objections by the beneficiaries or the amounts claimed on account of cost of hedging or foreign exchange rate variation, the generating company may make an appropriate application before the Commission for its decision.

65. Application fee and the publication expenses

The following fees, charges and expenses shall be reimbursed directly by the beneficiary in the manner specified herein:

(1) The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be recovered by the generating company directly from the beneficiaries

(2) The fees and charges shall be reimbursed directly by the beneficiaries in proportion of their allocation in the generating stations.

(3) Fees and charges paid by the generating companies under the Karnataka Electricity Regulatory Commission (Fees) Regulations, 2016, as amended from time to time or any new regulations made in lieu thereof.

The Commission may, for the reasons to be recorded in writing and after hearing the affected parties, allow reimbursement of any fee or expenses, as may be considered necessary.

66. Power to Relax

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

67. Power to Remove Difficulty:

If any difficulty arises in giving effect to the provisions of these regulations, the Commission may, by order, make such provision not inconsistent with the provisions of the Act or provisions of other regulations specified by the Commission, as may appear to be necessary for removing the difficulty in giving effect to the objectives of these regulations.

By Approval of the Commission

Secretary

Karnataka Electricity Regulatory Commission

Appendix I

Depreciation Schedule

Sl. No.	Asset Particulars	Depreciation Rate (Salvage Value=10%) SLM
A	**Land under full ownership**	0.00%
B	**Land under lease**	
(a)	for investment in the land	3.34%
(b)	For cost of clearing the site	3.34%
(c)	Land for reservoir in case of hydro generating station	3.34%
C	**Assets purchased new**	
a.	Plant & Machinery in generating stations	
(i)	Hydro electric	5.28%
(ii)	Steam electric NHRB & waste heat recovery boilers	5.28%
(iii)	Diesel electric and gas plant	5.28%
b.	Cooling towers & circulating water systems	5.28%
c.	Hydraulic works forming part of the Hydro-generating stations	
(i)	Dams, Spillways, Weirs, Canals, Reinforced concrete flumes and siphons	5.28%
(ii)	Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge tanks, hydraulic control valves and hydraulic works	5.28%
d.	Building & Civil Engineering works	
(i)	Offices and showrooms	3.34%
(ii)	Containing thermo-electric generating plant	3.34%
(iii)	Containing hydro-electric generating plant	3.34%
(iv)	Temporary erections such as wooden structures	100.00%
(v)	Roads other than Kutcha roads	3.34%
(vi)	Others	3.34%

e.	Transformers, Kiosk, sub-station equipment & other fixed apparatus (including plant)	
(i)	Transformers including foundations having rating of 100 KVA and over	5.28%
(ii)	Others	5.28%
f.	Switchgear including cable connections	5.28%
g.	Lightning arrestor	
(i)	Station type	5.28%
ii)	Pole type	5.28%
(iii)	Synchronous condenser	5.28%
h.	Batteries	5.28%
(i)	Underground cable including joint boxes and disconnected boxes	5.28%
(ii)	Cable duct system	5.28%
i.	Overhead lines including cable support	
(i)	Lines on fabricated steel operating at terminal voltages higher than 66 KV	5.28%
(ii)	Lines on steel supports operating at terminal voltages higher than 13.2 KV but not exceeding 66 KV	5.28%
(iii)	Lines on steel on reinforced concrete support	5.28%
(iv)	Lines on treated wood support	5.28%
j.	Meters	5.28%
k.	Self-propelled vehicles	9.50%
l.	Air Conditioning Plants	
(i)	Static	5.28%
(ii)	Portable	9.50%
m.(i)	Office furniture and furnishing	6.33%

(ii)	Office equipment	6.33%
(iii)	Internal wiring including fittings and apparatus	6.33%
(iv)	Street Light fittings	5.28%
n.	Apparatus let on hire	
(i)	Other than motors	9.50%
(ii)	Motors	6.33%
o.	Communication equipment	
(i)	Radio and high frequency carrier system	6.33%
(ii)	Telephone lines and telephones	6.33%
(iii)	Fibre Optic	6.33%
p.	I. T Equipment including software	15.00%
q.	Any other assets not covered above	5.28%

Note: Where life of the particular asset is less than useful life of the project, the useful life of such particular asset shall be considered as per the provisions of the Companies Act, 2013 and subsequent amendment thereto.

TARIFF FILING FORMS (THERMAL) FOR DETERMINATION OF TARIFF Main Tariff Form

PART-I

Annexure

ChecklistofMainTariffForms and otherinformationfor tarifffilingfor ThermalStations

Form No.	Title of Tariff Filing Forms (Thermal)	Tick
FORM- 1	Summary of Tariff	
FORM -1 (I)	Statement showing claimed capital cost	
FORM -1 (II)	Statement showing Return on Equity	
FORM-2	Plant Characteristics	
FORM-3	Normative parameters considered for tariff computations	
FORM- 4	Details of Foreign loans	
FORM- 4A	Details of Foreign Equity	
FORM-5	Abstract of Admitted Capital Cost for the existing Projects	
FORM- 6	Financial Package upto COD	
FORM- 7	Details of Project Specific Loans	
FORM- 8	Details of Allocation of corporate loans to various projects	
FORM-9	Statement of Additional Capitalisation after COD	
FORM- 10	Financing of Additional Capitalisation	
FORM- 11	Calculation of Depreciation on original project cost	
FORM- 12	Statement of Depreciation	
FORM- 13	Calculation of Weighted Average Rate of Interest on Actual Loans	
FORM- 14	Draw Down Schedule for Calculation of IDC & Financing Charges	
FORM- 15	Details of Fuel for Computation of Energy Charges[1]	
FORM- 16	Details of Limestone for Computation of Energy Charge Rate	
FORM-17	Details of Capital Spares	
FORM- 18	Non-Tariff Income	
FORM-19	Details of Water Charges	
FORM-20	Details of Statutory Charges	

PART-I

ListofSupportingForms /documentsfor tarifffilingfor ThermalStations

Form No.	Title of Tariff Filing Forms (Thermal)	Tick
FORM-A	Abstract of Capital Cost Estimates	
FORM-B	Break-up of Capital Cost for Coal/Lignite based projects	
FORM-C	Break-up of Capital Cost for Gas/Liquid fuel based Projects	
FORM-D	Break-up of Construction/Supply/Service packages	

FORM-E	Details of variables , parameters , optional package etc. for New Project	
FORM-F	Details of cost over run	
FORM-G	Details of time over run	
FORM –H	Statement of Additional Capitalisation during end of the useful life	
FORM –I	Details of Assets De-capitalised during the period	
FORM –J	Reconciliation of Capitalisation claimed vis-à-vis books of accounts	
FORM –K	Statement showing details of items/assets/works claimed under Exclusions	
FORM-L	Statement of Capital cost	
FORM-M	Statement of Capital Woks in Progress	
FORM-N	Calculation of Interest on Normative Loan	
FORM-O	Calculation of Interest on Working Capital	
FORM-P	Incidental Expenditure up to SCOD and up to Actual COD	
FORM-Q	Expenditure under different packages up to SCOD and up to Actual COD	
FORM-R	Actual cash expenditure	
FORM-S	Statement of Liability flow	
FORM-T	Summary of issues involved in the petition	

Listofsupportingdocumentsfor tarifffilingfor ThermalStations

S. No.	Information / Document	Tick
1	Certificate of incorporation, Certificate for Commencement of Business, Memorandum of Association, & Articles of Association (For New Station setup by a company making tariff application for the first time to CERC)	
2	A. Station wise and Corporate audited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexures on COD of the Station for the new station & for the relevant years. B. Station wise and Corporate audited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexures for the existing station for relevant years.	
3	Copies of relevant loan Agreements	
4	Copies of the approval of Competent Authority for the Capital Cost and Financial package.	
5	Copies of the Equity participation agreements and necessary approval for the foreign equity.	
6	Copies of the BPSA/PPA with the beneficiaries, if any	

7	Detailed note giving reasons of cost and time over run, if applicable. List of supporting documents to be submitted: a. Detailed Project Report b. CPM Analysis c. PERT Chart and Bar Chart d. Justification for cost and time Overrun	
8	Generating Company shall submit copy of Cost Audit Report along with cost accounting records, cost details, statements, schedules etc. for the Generating Unit wise /stage wise/Station wise/ and subsequently consolidated at Company level as submitted to the Govt. of India for first two years i.e. 2019-20 and 2020-21 at the time of mid-term true-up in 2021-22 and for balance period of tariff period 2019-24 at the time of final true-up in 2024-25. In case of initial tariff filing the latest available Cost Audit Report should be furnished.	
9	Any other relevant information, (Please specify)	
10.	Reconciliation with Balance sheet of any actual additional capitalization and amongst stages of a generating station	

Note 1: Electronic copy of the petition (in words format) and detailed calculation as per these formats (in excel format) and any other information submitted has to be uploaded in the e-filing website and shall also be furnished in pen drive/flash drive.

PART-I
FORM- 1

SummaryofTariff

Name of the Petitioner _____
Name of the Generating Station: _____
Place (Region/District/State):

S. No.	Particulars	Unit	Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8	9
1.1	Depreciation	Rs Lakh						
1.2	Interest on Loan	Rs Lakh						
1.3	Return on Equity[1]	Rs Lakh						
1.4	Interest on Working Capital	Rs Lakh						
1.5	O&M Expenses	Rs Lakh						
1.6	Special Allowance (If applicable)	Rs Lakh						
1.7	Compensation Allowance (If applicable – relevant for column 4 only)	Rs. Lakh						
	Total	Rs Lakh						
2.1	Landed Fuel Cost (coal/gas/RLNG/ liquid) as per FSA approved by beneficiaries	Rs/Ton						
	(%) of Fuel Quantity	(%)						
2.2	Landed Fuel Cost Imported Coal as per FSA approved by beneficiaries							
	(%) of Fuel Quantity							
2.3	Landed Fuel Cost (coal/gas /RLNG/liquid) other than FSA	Rs/Ton						
	(%) of Fuel Quantity	(%)						