JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION, RANCHI

JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020

No. _____--In exercise of powers conferred by sub-section (1) of Section 181 and clauses (zd), (ze) and (zf) of sub-section (2) of Section 181, read with Sections 61, 62, and 86, of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in that behalf, the Jharkhand State Electricity Regulatory Commission hereby makes the following Regulations. A Regulation guided by the principles contained in Sections 61 and 62 of the Act to encourage competition, efficiency, economical use of resources, good performance and optimum investments by the Generating Company within the State of Jharkhand and for determination of Multi-Year Tariff to be recovered by the Generating Company for the prudent expenses incurred for generating electricity.

CHAPTER-I

SCOPE, EXTENT AND DEFINITIONS

A 1. Short Title and Commencement

1.1 These Regulations shall be called the Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020.

1.2 These Regulations shall come into force for the period from April 01, 2021 to March 31, 2026, after its publication in the Official Gazette of the Government and unless reviewed earlier or extended by the Commission, shall remain in force upto March 31, 2026:

Provided that where a generating station or Unit thereof, has been declared under commercial operation before the date of commencement of these Regulations and whose tariff has not been finally determined by the Commission till that date, tariff in respect of such generating station or Unit thereof for the period ending March 31, 2021 shall be determined in accordance with the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010, JSERC (Terms and Conditions of Tariff determination, Multi-Year Tariff Framework) Regulations, 2007, and JSERC (Terms and Conditions for determination of Thermal Generation Tariff) Regulations, 2004 as amended from time to time, as may be applicable.

Explanation:-

For all purposes including the review matters pertaining to the period till FY 2020-21, i.e., up to March 31, 2021, the issue related to determination shall be governed by JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010, JSERC (Terms and Conditions of Tariff determination, Multi Year Tariff Framework) Regulations, 2007, JSERC (Terms and Conditions for determination of Thermal Generation Tariff) Regulations, 2004 including amendment thereto, as the case maybe.

1.3 These Regulations shall extend to the whole of the State of Jharkhand.

1.4 These Regulations shall supersede the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010, JSERC (Terms and Conditions of Tariff determination, Multi-Year Tariff Framework) Regulations, 2007, and JSERC (Terms and Conditions for determination of Thermal Generation Tariff) Regulations, 2004 read with all amendments thereto.

A 2. Scope of Regulations and Extent of Application

2.1 These Regulations shall apply in all cases where tariff for a generating station or a Unit thereof is required to be determined by the Commission under Section 62 of the Act read with Section 86 thereof.

2.2 These Regulations shall not apply to the following cases:

1. Generating Stations whose tariff has been discovered through tariff based competitive bidding in accordance with the guidelines issued by the Central Government and adopted by the Commission under Section 63 of the Act;

2. Generating Stations based on renewable sources of energy.

A 3. Definitions and Interpretations

3.1 In these Regulations, unless the context otherwise requires:-

1. '**Accounting Statement**' means Accounting Statement/Annual Accounts for each Financial Year as defined in Jharkhand State Electricity Regulatory Commission (Power Regulatory Accounting) Regulations, 2016 and subsequent amendments thereof;

2. '**Act**' means the Electricity Act, 2003 (36 of 2003) and subsequent amendments thereof;

3. '**Additional Capitalisation**' means the capital expenditure incurred and capitalised or projected to be capitalised, after the date of commercial operation of the project and admitted by the Commission after prudence check, subject to provisions of Clause 14.1 to Clause 14.4 of these Regulations;

4. '**Aggregate Revenue Requirement**' or '**ARR**' means for each Financial Year, the costs pertaining to the Generating Company, which are permitted, in accordance with these Regulations, to be recovered from the tariffs and charges determined by the Commission;

5. '**Applicant**' means a Generating Company who has filed the Petition for determination of tariff or a Petition for truing up or annual performance review in accordance with the Act and these Regulations and includes a Generating Company whose tariff is the subject of a review by the Commission either suo-motu or on a Petition filed by any interested or affected person;

6. '**Auxiliary Energy Consumption**' or '**Aux**' in relation to a period in case of a generating station means the quantum of energy consumed by auxiliary equipment of the generating station, such as the equipment being used for the purpose of operating plant and machinery including switchyard of the generating station and transformer losses within the generating station, expressed as a percentage of the

sum of gross energy generated at the generator terminals of all the Units of the generating station:

Provided that auxiliary energy consumption shall not include energy consumed for supply of power to housing colony and other facilities at the generating station and the power consumed for construction works at the generating station:

Provided further that auxiliary energy consumption for compliance of revised emission standards shall also be considered;

7. **'Bank Rate**' means the one-year marginal cost of lending rate (MCLR) of the State Bank of India from time to time or any replacement thereof for the time being in effect;

8. '**Base Year**' means the Financial Year 2020-21 and used for the purposes of these Regulations;

9. '**Beneficiary**' in relation to a generating station covered under clauses (a) or (b) of sub-section 1 of Section 86 of the Act, means a Distribution Licensee who is purchasing electricity generated at such generating station by entering into a Power Purchase Agreement either directly or through a Trading Licensee on payment of capacity charges and energy charges:

Provided that where the Distribution Licensee is procuring power through a Trading Licensee, the arrangement shall be secured by the Trading Licensee through back to back Power Purchase Agreement and Power Sale Agreement;

10. '**Block**' in relation to a combined cycle thermal generating station includes combustion turbine-generator, associated waste heat recovery boiler, connected steam turbine-generator and auxiliaries;

11. '**Capital cost**' means the capital cost as determined in accordance with **Section A 13** of these Regulations;

12. '**CERC**' or '**Central Commission**' means the Central Electricity Regulatory Commission;

13. '**Change in Law**' means occurrence of any of the following events:-

i. the enactment, bringing into effect or promulgation of any new Indian Law; or

ii. adoption, amendment, modification, repeal or re-enactment of any existing Indian law; or

iii. change in interpretation or application of any Indian law by a competent court, Tribunal or Indian Governmental Instrumentality, which is the final authority under law for such interpretation or application; or

iv. change by any competent statutory authority in any condition or covenant of any consent, clearances or approval or licence available or obtained for the project; or

v. coming into force or change in any bilateral or multilateral agreement/treaty between the Government of India and any other Sovereign Government having implication for the generating station regulated under these regulations;

14. '**Commission**' means the Jharkhand State Electricity Regulatory Commission (JSERC);

15. '**Conduct of Business Regulations**' means the JSERC (Conduct of Business) Regulations, 2016, as amended from time to time;

16. '**Control Period**' means a multi-year period fixed by the Commission, from April 01, 2021 and up to March 31, 2026;

17. '**Cut-off Date**' means March 31, of the year closing after two years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of financial year, the cut-off date shall be March 31, of the year closing after three years of the year of commercial operation:

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

18. '**Date of Commercial Operation' or** '**COD**' means:-

i. in relation to a Unit or Block of the thermal generating station, the date declared by the Generating Company after demonstrating the maximum continuous rating

(MCR) or the installed capacity (IC) through a successful trial run after notice to the beneficiaries, from 0000 hour of which scheduling process as per the Indian Electricity Grid Code (IEGC) is fully implemented, and in relation to the generation station as a whole, the date of commercial operation of the last Unit or Block of the generating station;

ii. in relation to a Unit of hydro generating station, the date declared by the Generating Company from 0000 hour of which, after notice to the beneficiaries, scheduling process in accordance with the Indian Electricity Grid Code is fully implemented and in relation to the generating station as a whole, the date declared by the Generating Company after demonstrating peaking capability corresponding to installed capacity of the generating station through a successful trial run, after notice to the beneficiaries;

Explanation:-

1. In case the hydro generating station with pondage or storage is not able to demonstrate peaking capability corresponding to the installed capacity for reasons of insufficient reservoir or pond level, the date of commercial operation of the last Unit of the generating station shall be considered as the date of commercial operation of the generating station as a whole, provided that it will be mandatory for such hydro generating station to demonstrate peaking capability equivalent to installed capacity of the generating Unit or the generating station as and when such reservoir/pond level is achieved.

2. In case of a purely run-of-river hydro generating station, if the Unit or the generating station is declared under commercial operation during lean inflows period when the water is not sufficient for such demonstration, it shall be mandatory for such hydro generating station or Unit to demonstrate peaking capability equivalent to installed capacity as and when sufficient inflow is available;

19. **Day'** means the 24-hour period starting at 0000 hour;

20. **'Declared Capacity' or 'DC'** in relation to a generating station means, the capability to deliver ex-bus electricity in MW declared by such generating station in relation to any time-block of the day or whole of the day, duly taking into account the availability of fuel or water, and subject to further qualification in the relevant Regulation;

21. **'De-capitalization'** for the purpose of the tariff under these Regulations, means reduction in Gross Fixed Assets of the project corresponding to the assets taken out of service;

22. **'De-commissioning'** means removal from service of a generating station or a Unit thereof, after it is certified by the Central Electricity Authority or any other authorized agency, either on its own or on an application made by the project developer or the beneficiaries or both, that the project cannot be operated due to non-performance of the assets on account of technological obsolescence or uneconomic operation or a combination of these factors;

23. **'Design Energy'** means the quantum of energy, which can be generated in a 90% dependable year with 95% installed capacity of the hydro generating station;

24. **'Expenditure Incurred'** means the fund, whether equity or debt or both, actually deployed and paid in cash or cash equivalent, for creation or acquisition of a useful asset and does not include commitments or liabilities for which no payment has been released;

25. **'Existing generating station'** means a generating station declared under commercial operation on a date prior to April 01, 2021;

26. **Extended Life'** means the life of a generating station or Unit thereof beyond the period of useful life, as may be determined by the Commission on case to case basis;

27. **'Financial Year'** means a period commencing on April 01, of a calendar year and ending on March 31, of the subsequent calendar year;

28. **'Force Majeure Event**' means, with respect to any party, any event or circumstance, or combination of events or circumstances, which is not within the reasonable control of, and is not due to an act of omission or commission of that party and which, by the exercise of reasonable care and diligence, could not have been prevented; and, without limiting the generality of the foregoing, shall include the following events or circumstances:

    (i). acts of God, including but not limited to lightning, storm, action of the elements, earthquakes, flood, torrential rains, drought and natural disaster or any act of

God beyond the control of any party or due to any restraint of the State Government or Central Government or any other Statutory Authority;

(ii). strikes and industrial disturbances having a State-wide or extensive impact in the area of supply of a Licensee, but excluding strikes and industrial disturbances in the Licensee's own organisation;

(iii). acts of war, invasion, armed conflict or act of foreign enemy, insurrections, riots, revolution, terrorist or military action;

(iv). unavoidable accident, including but not limited to fire, explosion, radioactive contamination and toxic chemical contamination;

(v). any shutdown or interruption of the grid, which is required or directed by the concerned Load Despatch Centre;

29. **'Generating Company'** means any Company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person, which owns or operates or maintains a generating station(s);

30. 'Generating Station' shall have the same meaning as defined under sub-Section 30 of Section 2 of the Act and for the purpose of these Regulations shall also include stages or blocks or Units of a generating station;

31. **'Grid Code'** means the JSERC (State Grid Code) Regulations, 2008, as amended from time to time;

32. **'Gross Calorific Value' or 'GCV'** in relation to a thermal generating station means the heat produced in kcal by complete combustion of one kilogram of solid fuel or one litre of liquid fuel or one standard cubic meter of gaseous fuel, as the case may be;

33. **'Gross Station Heat Rate' or 'GHR'** means the heat energy input in kcal required to generate one kWh of electrical energy at generator terminals of a thermal generating station;

34. **'Income from Other Business'** is related to income received by the Generating Company in carrying out activities other than generating Business;

35. **'Infirm Power'** means electricity injected into the grid prior to the commercial operation of a Unit or block of the generating station;

36. **'Installed Capacity' or 'IC'** means the summation of the name plate capacities of all the Units of the generating station or the capacity of the generating station (reckoned at the generator terminals), approved by the Commission from time to time;

37. **'Licence'** means a Licence granted under Section 14 of the Act;

38. **'Maximum Continuous Rating' or 'MCR'** in relation to a Unit of the thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer at rated parameters, and in relation to a block of a combined cycle thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer with water/steam injection (if applicable) and corrected to 50 Hz grid frequency and specified site conditions;

39. '**Non-Tariff Income**' means income relating to the regulated Business other than from Tariff, including but not limited to profit derived from sale of scrap, rent of land or buildings, income from investments, miscellaneous receipts, etc.;

40. **'Normative Annual Plant Availability Factor' or 'NAPAF'** in relation to a generating station means the availability factor specified in Clause 16.1 and Clause 16.3 of these Regulations for thermal generating station and in Clause 18.2 and Clause 18.7 of these Regulations for hydro generating station;

41. **'Normative Annual Plant Load Factor' or 'NAPLF'** in relation to a generating station means the Plant Load Factor specified in Clause 16.1 and Clause 16.3 of these Regulations for thermal generating station;

42. **'Operation and Maintenance Expenses' or 'O&M expenses'** means the expenditure incurred for operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, maintenance, repairs and maintenance spares, consumables, insurance and overheads, and fuel other than used for generation of electricity;

43. **'Original Project Cost'** means the capital expenditure incurred by the Generating Company, within the original scope of the project up to the cut-off date as admitted by the Commission;

44. **'Plant Availability Factor' or '(PAF)'** in relation to a generating station for any period means the average of the daily declared capacities (DCs) for all the days during that period expressed as a percentage of the installed capacity in MW reduced by the normative auxiliary energy consumption;

45. **'Plant Load Factor' or '(PLF)'** in relation to thermal generating station or Unit for a given period means the total sent out energy corresponding to scheduled generation during the period, expressed as a percentage of sent out energy corresponding to installed capacity in that period and shall be computed in accordance with the following formula:

$$PLF\ (\%) = 100 \times \sum_{i=1}^{N} SG_i / \{N \times IC \times (1 - Aux_n)\}\ \%$$

Where,

N= number of time blocks in the given period;

IC=Installed Capacity of the generating station or Unit in MW;

SGi=Scheduled Generation in MW for the i^{th} time block in such period;

N=Number of time blocks during the period;

Aux_n=Normative Auxiliary Energy Consumption as a percentage of gross energy generation;

46. **'Project'** means:

i. in case of thermal generating station, all components of the thermal generating station and includes integrated coal mine, biomass pellet handling system, pollution control system, effluent treatment plan, as may be required;

ii. in case of hydro generating station, all components of the hydro generating station and includes dam, intake water conductor system, power generating station, as apportioned to power generation;

47. **'Prudence Check'** means scrutiny of reasonableness of any cost or expenditure incurred or proposed to be incurred in accordance with these Regulations by the Generating Company;

48. **'Pumped Storage Hydro Generating Station'** means a hydro generating station, which generates power through energy stored in the form of water energy, pumped from a lower elevation reservoir to a higher elevation reservoir;

49. **'Run-of-river generating station'** means a hydro generating station, which does not have upstream pondage;

50. **'Run-of-river generating station with pondage'** means a hydro generating station with sufficient pondage for meeting the diurnal variation of power demand;

51. **'Scheduled Commercial Operation Date or SCOD'** shall mean the date(s) of commercial operation of a generating station or generating Unit or block thereof or as indicated in the Investment Approval or as agreed in Power Purchase Agreement, whichever is earlier;

52. **'Scheduled Energy'** means the quantum of energy scheduled by the State Load Despatch Centre to be injected into the grid by a generating station over a day;

53. **'Scheduled Generation' or 'SG'** at any time or for any period or time-block means schedule of generation in MW or MWh ex-bus, given by the State Load Despatch Centre;

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

54. **'Small Gas Turbine Generating Station'** means and includes open cycle gas turbine or combined cycle generating stations with gas turbines in the capacity range of 50 MW or below;

55. **'State'** means the Jharkhand State;

56. **'State Load Despatch Centre' or 'SLDC'** means the centre established by the State Government for purposes of exercising the powers and discharging the functions under Section 31 of the Act;

57. **'Statutory Charges'** comprises taxes, cess, duties, royalties and other charges levied through Acts of the Parliament or State Legislatures or by Indian Government Instrumentality under relevant statutes;

58. **'Storage type generating station'** means a hydro generating station associated with large storage capacity to enable variation of generation of electricity according to demand;

59. **'Tariff'** shall mean the schedule of charges for generation and bulk supply of electricity together with terms and conditions applicable thereof;

60. **'Tariff Period'** shall mean the period from April 01, 2021 and up to March 31, 2026 for which Tariff is determined by the Commission under these Regulations;

61. **'Trial Run and Trial Operation'** Trial Run in relation to generating station or Unit thereof shall mean the successful running of the generating station or Unit thereof at maximum continuous rating or installed capacity for continuous period of 72 hours in case of Unit of a thermal generating station or Unit thereof and 12 hours in case of a Unit of a hydro generating station or Unit thereof:

    Provided that where the beneficiaries have been tied up for purchasing power from the generating station, the trial run shall commence after seven days' notice by the Generating Company to the beneficiaries and concerned RLDC or SLDC, as the case may be:

    Provided further that the short interruptions, for a cumulative duration of 4 hours, shall be permissible, with corresponding increase in the duration of the test. Cumulative interruptions of more than 4 hours shall call for repeat of trial operations or trail run:

    Provided also that the partial loading may be allowed with the condition that average load during the duration of the trial run shall not be less than Maximum

Continuous Rating or the Installed Capacity or the Name Plate excluding period of interruption and partial loading but including the corresponding extended period:

Provided also that the Units of thermal and hydro Generating Stations shall also demonstrate capability to raise load up to 105% or 110% of its Maximum Continuous Rating or the Installed Capacity or the Name Plate as the case may be;

62. '**Unit'** in relation to a thermal generating station other than combined cycle thermal generating station means steam generator, turbine-generator and auxiliaries, or in relation to a combined cycle thermal generating station, means turbine-generator and auxiliaries; and in relation to a hydro generating station means turbine-generator and its auxiliaries;

63. **'Useful life'** in relation to a Unit of a generating station from the date of commercial operation shall mean the following, namely:-

i.	Coal/Lignite based thermal generating station:	25 years;
ii.	Gas/Liquid fuel based thermal generating station:	25 years; and
iii.	Hydro generating station including pumped storage stations:	hydro generating 40 years.

Provided that the extension of life of the projects beyond the completion of their useful life shall be decided by the Commission after prudence check based on the facts, details and justifications presented before the Commission by the Generating Company or suo-motu on case to case basis;

64. **'Year'** means Financial Year;

65. '**Zero Date**' means the date indicated in the Investment Approval for commencement of implementation of the project and where no such date has been indicated, the date of Investment Approval shall be deemed to be Zero Date;

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

3.3 Reference to any Act, Rules and Regulations shall include amendment or consolidation or re-enactment thereof.

3.4 All proceedings under these Regulations shall be governed by the JSERC (Conduct of Business) Regulations, 2016 as amended or re-enacted from time to time.

A 4. Norms of Operation to be Threshold Norms

4.1 For removal of doubts, it is clarified that the norms of operation specified under these Regulations are the threshold norms and this shall not preclude the Generating Company and Beneficiaries from agreeing to improved norms of operation and in such case the improved norms shall be applicable for the determination of tariff:

Provided that if Power Purchase Agreement between Generating Company and the Beneficiary stipulates better norms of operation then such norms provided in the Power Purchase Agreement shall be considered for the determination of tariff.

CHAPTER-II

TARIFF FRAMEWORK AND GUIDING PRINCIPLES

A 5. MYT Framework

5.1 The MYT Framework shall commence from April 01, 2021 and unless reviewed earlier or extended by the Commission, shall be applicable till March 31, 2026. The ARR filings for the Control Period shall be done in accordance with the MYT framework contained in these Regulations.

5.2 The Generating Company shall file MYT Application along with supporting documents before the Commission as per the timelines specified in **Section A 39** of these Regulations.

5.3 The MYT Application shall include statements containing ARR along with its break up for the Years of the previous Control Period based on audited accounts for FY 2015-16 to FY 2019-20, revised estimates for Base Year FY 2020-21, and projections for each year of the Control Period.

5.4 The Guiding Principles for MYT Framework are described in **Section A 6** of these Regulations.

5.5 The principles for determination of ARR for the Control Period are described in **Chapter III** of these Regulations and the procedure for annual filing during the Control Period is described in **Chapter VI** of these Regulations.

A 6. Guiding Principles for MYT Framework

6.1 The Commission shall adopt Multi Year Tariff Framework for approval of ARR and determination of tariff. The ARR shall be determined for each year of the Control Period.

6.2 The Multi Year Tariff framework shall be based on the following:-

1. Business Plan of the Generating Station for the entire Control Period to be filed before the Commission for approval, along with MYT Petition prior to the start of the Control Period or within such period as the Commission may direct;

2. Generating Company's forecast of expected tariff for sale of power for each year of the Control Period, based on reasonable assumptions of the underlying financial

and operational parameters laid down under these Regulations and on the basis of the Business Plan;

3. Trajectory for specific parameters, shall be prescribed by the Commission, for improvement through incentives and disincentives;

4. Annual review of performance, which shall be conducted vis-à-vis the approved forecast and categorization of variations in performance into controllable and uncontrollable factors; and

5. Mechanism for sharing approved gains or losses on account of controllable and uncontrollable factors.

Determination of Baseline

6.3 The values for the Base Year of the Control Period shall be determined on the basis of the audited accounts available for FY 2015-16 to FY 2019-20. In the absence of audited accounts of any such year, the Commission may consider best estimate for such years after carrying out due, prudence check and taking into account other factors as considered relevant by the Commission.

6.4 The Commission will normally not revise the performance targets during the Control Period, unless the Commission is of the view that there is a major variation in approved numbers vis-à-vis actuals.

Business Plan

6.5 Each Generating Company shall file for the Commission's approval a Business Plan approved by an authorized signatory, as per the timelines specified in **Section A 39** of these Regulations.

6.6 The Business Plan shall be for the entire Control Period and shall *inter-alia* contain:-

a) **Capital Investment Plan:** The Generating Company shall submit the Capital Investment Plan for the entire Control Period, detailing the investments planned by the Generating Company along with the corresponding capitalisation schedule and financing plan. This Plan shall also include capacity enhancement plan, if any, and proposed efficiency improvements and its cost benefit analysis. It shall also submit plant-wise details of Capital Structure and cost of Financing (interest on Debt) and return on equity, after considering the existing market conditions, terms

of the existing loan agreements, risk associated in generating business and creditworthiness;

b) **Operational Plan:** A set of targets proposed for performance parameters such as Annual Plant Availability Factor (PAF), Plant Load Factor (PLF), Gross Station Heat Rate (SHR), Secondary Fuel Oil Consumption, Auxiliary Power Consumption (Aux) etc., and shall also include Unit-wise Outage Plan;

c) Human Resource Plan: Human Resource Plan with manpower planning including details of the estimated year wise manpower addition and retirements for the Control Period to run the power plant efficiently and effectively;

d) Business Plan shall also contain the requisite information for the preceding Control Period:

Provided that requisite information for the preceding Control Period shall include year-wise audited data on Scheme-wise capital investment, capacity enhancement plan, if any, proposed efficiency improvements and its cost benefit analysis, quality improvement measures undertaken, Employee Expenses, Repair & Maintenance Expenses and A&G Expenses along with detailed break up and any other information used for preparing projections of various performance parameters and other components during the Control Period. In case of a new generating plant, such information is required to be submitted for the period of operations up to the start of the Control Period.

Capital Investment Plan

6.7 The Generating Company shall file for the Commission's approval a Capital Investment Plan for the entire Control Period along with the Business Plan. The Capital Investment Plan shall be prepared scheme-wise and each scheme shall include:-

1. Purpose of investment;
2. Approval of Competent Authority;
3. Detailed Project Report;
4. Capital Structure;
5. Capitalisation Schedule;
6. Implementation schedule including timelines;
7. Cost-benefit analysis & Rate reasonability;
8. Improvement in operational efficiency envisaged in the Control Period;

9. On-going schemes that will spill over into next financial year under review along with justification;
10. New schemes that will commence during the Control Period but may be completed within or beyond the Control Period.

6.8 During the Annual Performance Review, the Commission shall monitor the year-wise progress of the actual capital expenditure incurred by the Generating Company vis-à-vis the approved capital expenditure. The Generating Company shall submit the actual capital expenditure incurred along with the Annual Performance Review Filing.

6.9 The Commission shall review the actual capitalisation at the end of each year of the Control Period vis-à-vis the approved capitalisation schedule and shall true up the ARR based on actual capitalisation for the year for which True up has been filed and also revise the ARR components for the year for which APR and Tariff have been sought.

6.10 In case the capital expenditure is required for emergency work, which has not been approved in the Capital Investment Plan, the Generating Company shall submit an application containing all relevant information along with reasons justifying emergency nature of the proposed work seeking approval of the Commission:

Provided that in case the capital expenditure is required for emergency work or unforeseen situation to mitigate threat to life and property and if prior intimation thereof to the Commission shall cause any irreparable loss or injury, the Generating Company may undertake such capital expenditure and submit the details for post-facto approval of the Commission along with next Tariff Petition with all relevant details.

Performance Parameters

6.11 The Commission has stipulated following performance parameters that are deemed to be controllable in nature:-

a) Normative Annual Plant Availability Factor (NAPAF);
b) Station Heat Rate (SHR);
c) Auxiliary Energy Consumption (Aux);
d) Secondary Fuel Oil Consumption;
e) O&M Expenses.

6.12 The variation from performance targets set for the controllable parameters as specified in Clause 6.11 of these Regulations, shall be subject to incentive and penalty framework, as detailed in Clause 6.13 to Clause 6.15 of these Regulations.

Incentive and Penalty Framework

6.13 Any financial loss on account of underperformance with respect to the performance parameters as specified in Clause 6.11 of these Regulations will not be reviewed during the Control period and is not recoverable through tariff. In case of any financial gain with respect to the performance parameters as specified in Clause 6.14, the gain shall be shared in the manner specified in Clause 6.14.

6.14 **Sharing of gains due to variation in norms:** The Generating Company shall work out gains based on the actual performance of applicable controllable parameters as under:-

1. Station Heat Rate;
2. Secondary Fuel Oil Consumption; and
3. Auxiliary Energy Consumption.

The financial gains by the Generating Company, on account of above controllable parameters shall be shared between the Generating Company and the beneficiaries on annual basis. The financial gains computed as per the following formula for a thermal generating station shall be shared in the ratio of **50:50** between the generating stations and beneficiaries.

Net Gain = (ECR_N - ECR_A) x Scheduled Generation;

Where,

ECR_N: Normative Energy Charge Rate computed on the basis of norms specified for Station Heat Rate, Auxiliary Energy Consumption and Secondary Fuel Oil consumption.

ECR_A: 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 [0.80 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 [0.80 or ECR, whichever is lower]

6.15 The Commission shall also permit pass-through of variations in performance parameters on account of Force Majeure events in the tariff, based on the submission of actual values by the Generating Company and subsequent validation and approval by the Commission.

A 7. Truing-up

7.1 The Generating Company shall submit the Petition for truing up for each year of the Control Period on the basis of audited accounts duly audited and certified by the auditors as per the timelines stipulated in **Section A 39**.

7.2 Where after the truing up, the revenue recovered exceeds the trued up value approved by the Commission under these Regulations, the Generating Company shall refund to the Beneficiaries, the surplus amount so recovered as specified in Clause 7.4 of these Regulations.

7.3 Where after the truing up, the revenue recovered is less than the trued up value approved by the Commission under these Regulations, the Generating Company shall recover from the Beneficiaries, the gap amount in accordance with Clause 7.4 of these Regulations.

7.4 The amount under-recovered or over-recovered, along with simple interest at the rate equal to Bank Rate as on April 01 of the respective year plus 350 basis points, shall be recovered or refunded by the Generating Company in six equal monthly instalments starting within three months from the date of the Tariff Order issued by the Commission:

Provided that no carrying cost on delay shall be allowed on unrecovered gap if the Generating Company fails to submit the Petition as per timelines stipulated in **Section A 39**:

Provided also that any adverse financial impact on account of variation in uncontrollable items due to lapse on part of the Generating Company or its suppliers/contractors shall not be allowed in truing up.

A 8. Annual Performance Review (APR)

8.1 The Generating Company shall file APR Petition, for Annual Performance Review along with details of capital expenditure, additional capitalization, sources of financing, operations and maintenance expenditure, actual loan portfolio with the interest paid, along with other components of ARR incurred/projected to be incurred for the year under review, as per timelines stipulated in **Section A 39** of these Regulations.

8.2 The Generating Company along with Annual Performance Review petition, shall also claim revised ARR for the following year based on the truing up of the previous year.

8.3 The Scope of the Annual Performance Review shall be comparison of the approved expenses vis-à-vis revised estimates for the year/s and shall comprise the following:-

a) Comparison of Performance Targets vis-a-vis revised estimates based on the latest actual data available;

b) Comparison of Approved Capital Expenditure and Capitalisation vis-à-vis revised estimates by the Generating Company based on the latest actual data available;

c) Comparison of Other Expenses such as Interest on Loan, Interest on Working Capital, Return on Equity, Depreciation and O&M Expenses approved by the Commission vis-à-vis the revised estimates by the Generating Company based on the latest actual data available;

d) Computation of the sharing of gains and losses on account of controllable factors for the previous year;

e) Approved Revenue vis-à-vis revised estimates based on the latest actual data available;

f) Any other Expenses/Revenues impacting ARR.

8.4 The Generating Company may, as a result of additional information not previously known or available to them at the time the forecast was developed, apply for a modification in the approved forecast of ARR as part of the Annual Performance Review.

8.5 The Commission if, as a result of additional information not previously known or available to it at the time the forecast was developed, is of the view that the same may result in significant over/under recovery, either suo-motu or on a Petition made by any interested or affected party, modify the approved forecast of ARR for the remainder of the Control Period, as part of the Annual Performance Review.

8.6 Based on the analysis of Annual Performance Review and Truing up, the Commission may revise the ARR and Tariff for the ensuing year of the Control Period.

CHAPTER-III

DETERMINATION OF TARIFF

A 9. Details for True-up, APR and determination of ARR & Tariff

9.1 The Generating Company shall submit the details for True-up for the previous year, Annual Performance Review for the current year and Tariff Determination for the ensuing year as per the principles discussed in the subsequent Sections.

A 10. Principles for Determination of Tariff

Existing Generating Station:

10.1 The Generating Stations with Commercial Operation Date prior to April 01, 2021 shall be considered as Existing Generating Stations. The Tariff for such generating stations shall be determined on the basis of Capital Cost along with additional capitalisation as admitted by the Commission as on March 31, 2021.

New Generating Station:

10.2 All such generating stations which have been declared under commercial operation on or after April 01, 2021 shall file Petition seeking approval of Capital Cost and Tariff for the Control Period within 60 days from the date of Commercial Operation along with Auditor Certificate and in case of non-availability of Auditor Certificate, a Management Certificate duly approved by Board of Directors of Company indicating the Capital Cost incurred as on date of Commercial Operation and the projected additional capital expenditure for respective years of the Control Period from FY 2021-22 to FY 2025-26.

A 11. Principles of Tariff Determination

11.1 The Tariff in respect of a generating station may be determined for the whole of the generating station or Unit thereof.

11.2 Where only a part of the generation capacity of a generating station is tied up for supplying power to the beneficiaries through long-term Power Purchase Agreement, the Units for such part capacity shall be clearly identified and in such case, the tariff shall be determined for such identified capacity. Where the Unit(s) corresponding to such part capacity cannot be identified, the tariff of the generating station may be determined with reference to the capital cost of the entire project, but tariff so determined shall be applicable corresponding to the part capacity contracted for supply to the beneficiaries.

11.3 In case of expansion of existing generating station, the tariff shall be determined for the expanded capacity in accordance with these Regulations:

Provided that the common infrastructure of existing generating station shall be utilized for the expanded capacity and the benefit of new technology in the expanded capacity, as determined by the Commission, shall be extended to the existing capacity.

11.4 Assets installed for implementation of the revised emission standards shall form part of the existing generation project and tariff thereof shall be determined separately on submission of the completion certificate by the Board of the Generating Company.

11.5 In case of multi-purpose hydro schemes, with irrigation, flood control and power components, the capital cost chargeable to the power component of the scheme only shall be considered for determination of tariff.

A 12. In-principle approval in specific circumstances:

12.1 The Generating Company undertaking any additional capitalization on account of change in law events or Force Majeure conditions may file Petition for in-principle approval for incurring such expenditure after prior notice to the beneficiaries along with underlying assumptions, estimates and justification for such expenditure if the estimated expenditure exceeds 10% of the admitted capital cost of the project or Rs. 50 Crore, whichever is lower.

A 13. Capital Cost

13.1 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.

Capital cost for New Project

13.2 The capital cost for 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 actual loans drawn;

c) Any gain or loss on account of Foreign Exchange Risk Variation pertaining to the loan amount availed during the construction period;

d) 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) Adjustment of revenue due to sale of Infirm Power in excess of fuel cost prior to the date of commercial operation as specified under Clause 14.17 of these Regulations;

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

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

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

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

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

l) Expenditure on account of Change in Law and Force Majeure Events; and

m) 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 entire benefits accrued under the PAT scheme with the beneficiaries.

Capital cost for Existing Project

13.3 The capital cost of an existing project shall include the following:-

a) Capital cost admitted by the Commission prior to April 01, 2021 duly trued up excluding liability, if any, as on April 01, 2021;

b) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these Regulations;

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

d) 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 railways;

e) 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 entire benefits accrued under the PAT scheme with the beneficiaries.

Capital Cost for Hydro Generating Project

13.4 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.

Exclusion from Capital Cost

13.5 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;

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.

Prudence Check of Capital Cost

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

a) 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 judgements and decisions in execution of the project;

b) In case 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.

c) Further, in case such cost has been incurred towards replacement or upgradation of any existing assets, the original cost of the replaced asset shall be reduced and de-capitalised from the Capital Cost.

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

13.7 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.

13.8 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.

13.9 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.

13.10 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.

13.11 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.

Controllable and Uncontrollable factors

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

13.13 The “controllable factors” shall include but shall not be limited to the following:-

1. 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

2. Delay in execution of the project on account of contractor or supplier or agency of the Generating Company.

13.14 The "uncontrollable factors" shall include but shall not be limited to the following:-

1. Force Majeure events;
2. Change in law; and
3. Land acquisition except where the delay is attributable to the Generating Company.

Initial Spares:

13.15 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**:** 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 under Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020.

A 14. Additional Capitalization

14.1 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, subject to ceiling norms specified in this Regulation;
d) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;
e) On account of change in law or in compliance to any existing law; and
f) Capital Expenses incurred due to force majeure conditions:

Provided that in case of any replacement/up gradation 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;

Provided that the details of work included in the original scope of work along with estimates of expenditure, undischarged liabilities and works deferred for execution shall be submitted along with the application for determination of tariff;

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

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.

14.3 In case of replacement/up gradation 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 necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(i) 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;
(ii) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
(iii) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
(iv) The replacement of such asset or equipment has otherwise been allowed by the Commission.

14.4 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) Any additional works/services, which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost;
e) 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;
f) Deferred works relating to ash pond or ash handling system in addition to the original scope of work, on case to case basis:

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

g) Usage of water from sewage treatment plant in thermal generating station.

14.5 In case there is additional capitalization proposed during the fag end of the project (atleast 5 years before the Useful life or extended Useful life) of the plant, the Generating Company is required to submit the detail justification of its necessity during the fag year, Cost-Benefit analysis, DPR, if any and rate reasonability along with the residual life assessment report of the Project. The Commission may carry out prudence check based on the detail submitted by the Generating Company, its necessity, its financial viability before approval of such additional capitalization.

14.6 In case of de-capitalisation of assets of a Generating Company, the original cost of such asset as on the date of decapitalization shall be deducted from the value of gross fixed asset and corresponding outstanding loan on such assets as well as equity shall be deducted from loan and the equity balances respectively. Such deductions shall be carried out in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan shall be carried out duly taking into consideration the year in which it was capitalised.

14.7 Impact of additional capitalisation within the approved scheme cost on tariff shall be considered by the Commission during the Annual Performance Review.

Additional Capitalization on account of Renovation and Modernization

14.8 The Generating Company, for meeting the expenditure on Renovation and Modernization for the purpose of extension of life beyond the useful life of the generating station or a Unit thereof, shall make an application before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, rate reasonability, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, record of consultation with Beneficiaries and any other information considered to be relevant by the Generating Company:

Provided that the Generating Company making the applications for renovation and modernization shall not be eligible for Special Allowance under these Regulations:

Provided further that the Generating Company intending to undertake renovation and modernization shall be required to obtain the consent of the beneficiaries for such renovation and modernization and submit the same along with the Petition.

14.9 Where the Generating Company makes an application for approval of renovation and modernization proposal, the approval shall be granted after due consideration of reasonableness of the cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, expected life extension and such other factors as may be considered relevant by the Commission.

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

Special Allowance for Thermal Generating Station

14.11 In case of coal fired generating stations, the Generating Company, at its discretion, 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 modernization beyond the Useful Life of the generating station or a Unit thereof, and in such an event revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the special allowance shall be included in the annual fixed cost:

Provided also that such option shall not be available for a generating station or Unit, which is in a depleted condition or operating under relaxed operational and performance norms.

14.12 A Generating Company (coal-based/lignite fired thermal generating station) on opting for Special Allowance shall be allowed @ Rs. 9.50 lakh/MW/year for the Control Period from FY 2021-22 to FY 2025-26, Unit-wise from the financial year following the completion of useful life of the respective Unit of generating station:

Provided that if a Unit is in commercial operation for more than 25 years as on April 01, 2021, this allowance shall be admissible from FY 2021-22:

Provided further that if special allowance is granted by the Commission, the expenditure incurred or utilized from special allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission immediately thereafter.

Additional Capitalization on account of Revised Emission Standards

14.13 A Generating Company required 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 along with feasibility report and associated impact on Tariff before the Commission.

14.14 The Petition under above Clause 14.13 shall contain DPR, details of proposed technology and its appropriateness, 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, Residual Life Assessment Report by an competent third party technical agency and any other information considered to be relevant by the Generating Company;

Provided that the Generating Company shall furnish all relevant details as sought by the Commission to carry out necessary due diligence for deciding the matter.

14.15 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.

14.16 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.

Sale of Infirm Power

14.17 Supply of infirm power shall be accounted as per Jharkhand State Electricity Regulatory Commission (State Grid Code) Regulations, 2008 and subsequent amendments thereof or any other relevant Regulations specified by the Commission from time to time and paid for from the regional or State UI pool account at the applicable frequency-linked UI rate:

Provided that any revenue earned by the Generating Company from sale of infirm power after accounting for the fuel expenses shall be applied in adjusting the capital cost accordingly.

CHAPTER-IV

TARIFF STRUCTURE

A 15. Components of tariff

15.1 The tariff for supply of electricity from a thermal generating station shall comprise two parts namely, Capacity Charge (for recovery of Annual Fixed Cost consisting of the components as specified in Clause 15.3 of these Regulations) and Energy Charge (for recovery of primary and secondary fuel cost and cost of limestone and any other reagent, as may be applicable as specified in Clause 15.4 of these Regulations, in case of thermal generating station) as specified in these Regulations.

15.2 The supplementary Capacity Charges for additional capitalization and supplementary Energy Charges, on account of implementation of revised emission standards in existing generating station or new generating station, as the case may be, shall be determined by the Commission separately.

15.3 **Capacity Charges:** The Capacity Charges shall be derived on the basis of annual fixed cost. The Annual Fixed Cost (AFC) of a generating station shall consist of the following components:

1. Return on Equity;
2. Interest on Loan Capital;
3. Depreciation;
4. Interest on Working Capital;
5. Operation & Maintenance Expenses, and
6. Non-Tariff Income, and
7. Income from Other Business:

Provided that Special Allowance in lieu of Renovation & Modernization, where opted in accordance with Clause 14.11 and Clause 14.12 of these Regulations, shall be recovered separately and shall not be considered for computation of Working Capital.

15.4 **Energy Charges:** Energy Charges shall be derived on the basis of the landed fuel cost (LFC) of a generating station (excluding hydro) and shall consist of the following cost:

(a) Landed Fuel Cost of primary fuel;

(b) Cost of secondary fuel oil consumption; and

(c) Cost of limestone or any other reagent, as applicable:

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

Provided further that the supplementary energy charges, if any, on account of meeting the revised emission standards in case of a thermal generating station shall be determined separately by the Commission.

15.5 The tariff for supply of electricity from a hydro generating station shall comprise capacity charge and energy charge to be derived in the manner specified in Clause 19.1 to Clause 19.9 of these Regulations.

Debt-Equity Ratio

15.6 **Existing Projects:** For existing projects declaring Commercial Operation on or before April 01, 2021, the following Capital Structure is allowed:-

1. Debt-Equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2021 shall be considered;

2. In case of the generating station declared under commercial operation prior to April 01, 2021, but where debt-equity ratio has not been determined by the Commission for determination of tariff for the period ending March 31, 2021, the Commission shall approve the debt-equity ratio in accordance with Clause 15.7 of these Regulations.

3. Any expenditure incurred or projected to be incurred on or after April 01, 2021, 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 15.7 of these Regulations.

15.7 **New Projects:** For new projects, declaring Commercial Operation on or after April 01, 2021, the following Capital Structure is allowed:-

1. Normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff.

2. In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;

3. In case the actual equity employed is less than 30%, the actual debt-equity ratio shall be considered;

4. The premium, if any raised by the Generating Company while issuing share capital and investment of internal accruals created out of free reserve, for the funding of the project, shall also be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilized for meeting capital expenditure of the generating station;

5. The Equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;

6. Any consumer contribution, work carried out under deposit and grant obtained for the execution of the project shall not be considered as part of the capital structure for the purpose of computation of normative debt-equity.

Note 1: Any expenditure admitted on account of committed liabilities within the original scope of work and the expenditure deferred on techno-economic grounds but falling within the original scope of work shall be serviced in the normative debt-equity ratio specified in these Regulations;

Note 2: Any expenditure on replacement of old assets or on renovation and modernization or life extension shall be considered on normative debt-equity ratio specified in these Regulations after writing off the entire book value of the original assets from the capital cost of the new asset;

Note 3: Any expenditure admitted by the Commission for determination of tariff on account of new works not in the original scope of work shall be serviced in the normative debt-equity ratio specified in these Regulations.

15.8 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.

Return on Equity

15.9 The return on equity shall be computed in rupee terms, on the equity base determined in accordance with Clause 15.6 and Clause 15.7 of these Regulations.

15.10 The return on equity shall be computed on post-tax basis at the base rate of 13.00% for thermal generating stations, and run of the river hydro generating station, and at the base rate of 14.00% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that the return on equity shall be allowed only on the equity employed on assets which are commissioned and are in use;

Provided further that the rate of return of a new project 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 Restricted Governor Mode Operation (RGMO)/Free Governor Mode Operation (FGMO), data telemetry, communication system up to load despatch centre or protection system;

Provided also as and when any of the above requirements are found lacking in a generating station based on the report submitted by the SLDC, return on equity shall be reduced by 1.00% for the period for which the deficiency continues.

Income Tax

15.11 Tax on income, if any, on the Generating business of the Generating Company shall be limited to tax on the allowed return on equity;

15.12 The income tax actually payable or paid limited to the tax on allowed return on equity shall be included in the ARR while truing up. The actual assessment of income tax should take into account benefits of tax holiday, and the credit for carry forward losses applicable as per the provisions of the Income Tax Act, 1961 and its amendments thereof shall be passed on to the Beneficiaries. Tax on the other income streams of the Generating Company shall not be recovered from the Beneficiaries.

Interest on Loan Capital

15.13 The loans arrived at in the manner indicated in Clause 15.6 and Clause 15.7 of these Regulations, shall be considered as gross normative loan for calculation of Interest on Loan.

15.14 The normative loan outstanding as on April 01, 2021 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2021 from the gross normative loan.

15.15 The repayment for each year of the Control Period shall be deemed to be equal to the depreciation allowed for that financial year.

15.16 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-capitalization of such assets.

15.17 Notwithstanding any moratorium period availed by the Licensee, the repayment of loan shall be considered from the first year of operation of the scheme.

15.18 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the Generating Company:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, then the rate of interest shall be considered on normative basis and shall be equal to Bank Rate as on April 01 of the respective year of the Control Period plus 200 basis points;

Provided also that, in case of new Generating Company commencing its operation after the date of effectiveness of these Regulations, and which does not have actual loan portfolio, the rate of interest shall be considered on normative basis and shall be equal to Bank Rate as on April 01 of the respective year of the Control Period plus 200 basis points.

15.19 The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest;

15.20 The above interest computation shall exclude interest on loan amount, normative or otherwise, to the extent of capital cost funded by Consumer Contribution, Grants or Deposit Works carried out by Generating Company.

15.21 The Generating Company shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be pass-through to the Beneficiaries and the net savings shall be shared between the beneficiaries and the Generating Company, in the ratio of 50:50. The Generating Company need to submit the new loan agreement detailing the new loan structure after re-financing.

15.22 In case of dispute, any of the parties may make an application in accordance with the JSERC (Conduct of Business) Regulations, 2016, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute.

Interest on Working Capital

15.23 The Commission shall determine the Working Capital requirement on normative basis for coal-based generating stations, which shall comprise the following components:

1. 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;
2. Cost of coal or lignite and limestone for 30 days for generation corresponding to normative annual plant availability factor;
3. 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;
4. Operation and Maintenance expenses, including water charge and security expenses for one month;
5. Maintenance spares @ 20% of Operation and Maintenance Expenses;
6. Receivables equivalent to 45 days of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor:

Provided that the cost of primary fuel shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating station and gross calorific value of the fuel on **'as received basis'** as per

actual weighted average for three months preceding the first month for which tariff is to be determined:

Provided further 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) 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.

15.24 The working capital for Open-cycle Gas Turbine/Combined Cycle thermal based Generating Stations shall comprise the following components:

1. Fuel expenses 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;
2. 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 station on gas fuel and liquid fuel;
3. Operation and Maintenance Expenses, including water charges and security expenses for one month;
4. Maintenance spares @ 30% of Operation and Maintenance Expenses including water charges and security expenses;
5. Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on Normative Annual Plant Availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel:

Provided that the cost of primary fuel shall be based on the landed cost incurred as per actual weighted average for three months preceding the first month for which tariff is to be determined:

Provided further that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed fuel 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.

15.25 The working capital for Hydro Generating Stations (including Pumped Storage Hydro Generating Station) and shall comprise the following components:

1. Operation and Maintenance expenses, including security expenses for one month;
2. Maintenance spares @ 15% of Operation & Maintenance Expenses including security expenses;
3. Receivables equivalent to 45 days of annual fixed cost.

15.26 The rate of Interest on Working Capital shall be on normative basis and shall be equal to Bank Rate plus 350 basis points as on September 30 of the financial year in which the MYT Petition is filed or as on April 01, of the year during the Control Period from FY 2021-22 to FY 2025-26 in which the generating station or a Unit thereof, is declared under commercial operation, whichever is later:

Provided that the rate of interest on working capital shall be trued up on the basis of Bank Rate plus 350 basis points as applicable on April 01, of the respective financial year at the time of true up.

15.27 The interest on working capital shall be payable on normative basis notwithstanding that the Generating Company has not taken working capital loan from any outside agency.

Depreciation

15.28 Depreciation shall be calculated every year, on the amount of Capital Cost of the assets as admitted by the Commission. In case of multiple Units of a generating station, weighted average life for the generating station shall be applied:

Provided that depreciation shall not be allowed on assets funded by Consumer Contribution and Capital Subsidies/Grants. Provision for replacement of such assets shall be made in the Capital Investment Plan.

15.29 Depreciation for each year shall be determined based on the methodology as specified in these Regulations along with the rates and other terms specified in these Regulations.

15.30 Depreciation shall be calculated annually, based on the straight-line method, at the rates specified at **Appendix-I**. The base value for the purpose of depreciation shall be original cost of the asset:

Provided that the Generating Company shall ensure that once the individual asset is depreciated to the extent of seventy (70) percent of its book value, remaining depreciable value as on March 31 of the year closing shall be spread over the balance useful life of the asset;

Provided that in case the tenure of PPA executed between the Generating plant and Beneficiaries is more than that of the Useful life of the plant, the Commission after prudence check may consider the PPA life for spreading the remaining depreciable value as on March 31 of the year instead of useful life;

Provided that in case after carrying out the residual life assessment, it is found that the residual life of the generating station or unit as the case may be is beyond the useful life specified in these regulations the Commission after prudence check, may spread the remaining depreciable value to be recovered over the extended life of the plant.

15.31 Depreciation shall be charged from the first year of operation of the asset. In case, the operation of the asset is for a part of the year, depreciation shall be charged on a pro-rata basis:

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

15.32 The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset. Land is not a depreciable asset and its cost shall be excluded while computing 90% of the original 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 signed by the developers with the State Government for creation of the site:

Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term Power Purchase Agreement at regulated tariff.

15.33 The Commission may, in the absence of the Fixed Assets Register, calculate Depreciation (%) arrived by dividing the Depreciation and the Average Gross Fixed Assets as per the latest available Audited Accounts of the Generating Company. The Depreciation (%) so arrived shall be multiplied by the Average GFA approved by the Commission for the relevant Financial Year to arrive at the Depreciation for that Financial Year.

15.34 In case of de-capitalization of assets in respect of Generating Station or Unit thereof the cumulative depreciation shall be adjusted by taking into account the depreciation recovered through tariff towards decapitalization asset during its useful services.

Operation and Maintenance Expenses

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

1. Salaries, wages, pension contribution and other employee costs;
2. Administrative and General costs;
3. Repairs and maintenance expenses; and
4. Other miscellaneous expenses, statutory levies & taxes (except corporate income tax).

New Generating Stations:

15.36 The normative Operation and Maintenance Expenses of Coal based and Lignite fired (including those based on Circulating Fluidised Bed Combustion (CFBC) technology) generating stations shall be as follows:

Year	200/210/250 MW Sets	300/330/350 MW Sets	500 MW Sets	600 MW and above Sets
FY 2021-22	35.31	29.72	24.12	21.71
FY 2022-23	36.56	30.76	24.97	22.47
FY 2023-24	37.84	31.84	25.84	23.26
FY 2024-25	39.16	32.95	26.74	24.07
FY 2025-26	40.54	34.11	27.68	24.92

Note: all the values are in Rs. Lakh/MW

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 April 01, 2021, the Operation & Maintenance Expenses of such additional Unit(s) shall be admissible at 90% of the Operation & Maintenance Expenses as specified above:

Provided further that the O&M Expenses for the existing Stations will be approved by the Commission in their respective MYT Orders based on the actual value of O&M expenses of the past Control Period and after carrying out due prudence check.

15.37 The Normative Operation and Maintenance Expenses of Open Cycle Gas Turbine/Combined Cycle generating Stations shall be as follows:

Year	Gas Turbine/Combined Cycle Generating Stations	Small Turbine Power Generating Stations
FY 2021-22	18.84	38.80
FY 2022-23	19.50	40.16
FY 2023-24	20.19	41.57
FY 2024-25	20.90	43.02
FY 2025-26	21.63	44.53

Note: all the values are in Rs. Lakh/MW

15.38 The Normative Operation and Maintenance Expenses for Lignite-fired generating stations shall be as follows:

Year	125 MW Sets
FY 2021-22	33.37
FY 2022-23	34.54
FY 2023-24	35.76
FY 2024-25	37.01
FY 2025-26	38.30

Note: all the values are in Rs. Lakh/MW

15.39 The Normative Operation and Maintenance Expenses of generating stations based on coal rejects shall be as follows:

Year	O&M Expenses
FY 2021-22	33.37
FY 2022-23	34.54
FY 2023-24	35.76

Year	O&M Expenses
FY 2024-25	37.01
FY 2025-26	38.30

Note: all the values are in Rs. Lakh/MW

Existing Generating Stations

15.40 The O&M Expenses for the Base Year of the Control Period shall be approved by the Commission taking into account the audited accounts of each year of the previous Control Period, Business Plan filed by the Generating Company, estimates of the actual for the Base Year, prudence check and any other factor considered appropriate by the Commission.

15.41 The O&M expenses permissible towards ARR of each year of the Control Period shall be approved based on the formula shown below:

$O\&Mn = (R\&M_n + EMP_n + A\&G_n)$ + Terminal Liabilities

Where,

$R\&M_n$ – Repair and Maintenance Costs of the Generating Company for the n^{th} year;

EMP_n – Employee Costs of the Generating Company for the n^{th} year excluding terminal liabilities;

$A\&G_n$ – Administrative and General Costs of the Generating Company for the n^{th} year.

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

a) $(\text{Repair \& Maintenance})_n = K*GFA$

Where,

'K' is a constant (expressed in %) governing the relationship between Repair & Maintenance costs and Gross Fixed Assets (GFA) and will be calculated based on the % of Repair & Maintenance to GFA of the preceding year of the Base Year in the MYT Order;

'GFA' is the opening value of the gross fixed asset of the n^{th} year;

b) $EMP_{n} + A\&G_{n} = [(EMP_{n-1})* G_{n} + (A\&G_{n-1})] * (INDX_{n} / INDX_{n-1})$

Where,

EMP_{n-1} – Employee Costs of the Generating Company for the $(n-1)^{th}$ year excluding terminal liabilities;

$A\&G_{n-1}$ – Administrative and General Costs of the Generating Company for the $(n-1)^{th}$ year;

$INDX_{n}$ – Inflation factor to be used for indexing the employee cost and A&G cost. This will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding year before the base year;

G_{n} – is a growth factor for the n^{th} year and it can be greater than or lesser than zero based on the actual performance. Value of G_{n} shall be determined by the Commission in the MYT Order for meeting the additional manpower requirement based on the Generating Company Filing, benchmarking and any other factor that the Commission feels appropriate;

c) $INDX_{n} = 0.55*CPI_{n} +0.45*WPI_{n}$;

Note-1: For the purpose of estimation, the same $INDX_{n}$ /$INDX_{n-1}$value shall be used for all years of the Control Period. However, the Commission will consider the actual values in the $INDX_{n}$ /$INDX_{n-1}$ at the end of each year during the Annual Performance Review exercise and true up the employee cost and A&G expenses on account of this variation, for the Control Period;

Note-2: Any variation due to changes recommended by the Pay Commission or wage revision agreement, etc., will be considered separately by the Commission.

Note-3: Terminal Liabilities will be approved as per actual submitted by the Generating Company along with documentary evidence such as actuarial studies.

15.43 The Generating Company, in addition to the above details shall also submit the detailed break-up of the Legal/Litigation Expenses for the previous Years (FY 2015-16 to FY 2019-20) along with the details and documentary evidence of incurring such expenses. The Commission shall approve the legal expenses as per the relevant provisions of the Jharkhand State Litigation Policy based on the necessary documentary evidence submitted for the Control Period and shall carry out due prudence check of legal expenses at the time of truing up.

15.44 The Water Charges 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, type of cooling water system, subject to prudence check. The details regarding the same shall be furnished along with the Petition.

15.45 The additional Operation and Maintenance expenses on account of implementation of revised emission standards shall be approved on case to case basis.

15.46 In case of the hydro generating stations declared under commercial operation on or after April 01, 2021, 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, with escalation of 4.77% per annum.

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

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

Non-Tariff Income

15.48 The amount of Non-Tariff Income relating to the generating business as approved by the Commission shall be deducted from the ARR in determining the Tariff of the generating business:

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

15.49 The Non-Tariff Income shall include:

a) Income from rent of land or buildings;
b) Income from sale of scrap;
c) Income from investments;
d) Interest accrued on advances to suppliers/contractors;
e) Interest income on loans / advances to employees;
f) Income from rental of staff quarters;
g) Income by rental from contractors;
h) Income by hire charges from contactors and others;
i) Income by supervision charges, etc.;
j) Supervision charges for capital works;
k) Income from advertisements;
l) Income from sale of tender documents;
m) Income from sale of ash and other by products;
n) Profit from sale of assets i.e. difference of Sale value & Book value;
o) Any other Non-Tariff Income:

Provided that the interest earned from investments made out of return on equity corresponding to the Generating Business of the Generating Company shall not be included in Non-Tariff Income.

Provided that the onus to substantiate, to the satisfaction of the Commission, that such investments have been out of Return on Equity shall be on the Generating Company.

Income from Other Business

15.50 Where the Generating Company is engaged in any Other Business, the income from such business will be calculated considering the following conditions:

1. The Generating Company shall not in any manner utilize the assets and facilities of the Generating Business or otherwise directly or indirectly allow the activities to be undertaken in a manner that it results in the Generating Business subsidising the Other Business in any manner;

2. The Generating Company shall not in any manner, directly or indirectly encumber the assets and facilities of the Generating Business for the Other Business or for any activities other than the Generating Business;

3. The Generating Company shall duly pay for all costs accounted for in the Generating Business, which have been incurred for Other Business and in the event of such cost being incurred commonly for both the Generating Business and Other Business, apportion such cost and ensure due payment of apportioned costs to the Generating Business from the Other Business;

4. The revenue derived from the Other Business shall be commensurate with prevailing market condition for such similar business activities;

5. In addition to the sharing of costs under sub-clause 3 above, the Generating Company shall account for and ensure due payment to the Generating Business a certain proportion of revenues from the Other Business. As a general principle, the Generating Company shall retain 20% of the revenues arising on account of Other Business and pass on the remaining 80% of the revenues to the Generating Business.

15.51 The revenue from Other Business shall be deducted from the ARR in calculating the revenue requirement of the Generating Company:

Provided that the Generating Company shall follow a reasonable basis for allocation of all joint and common costs between the Generating Business and the Other Business and shall submit the Allocation Statement as approved by the Board of Directors to the Commission along with his application for determination of tariff:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceeds the revenues from such Other Business, no amount shall be allowed to be added to the ARR of the Generating Company on account of such Other Business.

A 16. Norms of Operation for Thermal Power Generating Station

16.1 The values for operational norms for the existing generating stations have been decided, based on the past operational data of these plants. The norms of operation as given hereunder shall apply for existing thermal power stations in the State:

Jojobera Thermal Power Station (TPCL) - Unit-II & III

Parameters	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Normative Annual Plant Availability Factor (%)	85%	85%	85%	85%	85%
Normative Annual Plant Load Factor (%)	85%	85%	85%	85%	85%
Gross Station Heat Rate (kcal/kWh)	2550	2550	2525	2525	2525
Auxiliary Consumption (%)	9.00%	9.00%	9.00%	9.00%	9.00%

Parameters	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Secondary Fuel Oil Consumption (ml/kWh)	0.50	0.50	0.50	0.50	0.50

Inland Power Limited (IPL)

Parameters	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Normative Annual Plant Availability Factor (%)	85%	85%	85%	85%	85%
Normative Annual Plant Load Factor (%)	85%	85%	85%	85%	85%
Gross Station Heat Rate (kcal/kWh)	2765	2765	2765	2765	2765
Auxiliary Consumption (%)	10.00%	10.00%	10.00%	10.00%	10.00%
Secondary Fuel Oil Consumption (ml/kWh)	0.50	0.50	0.50	0.50	0.50

Tenughat Thermal Power Station (TVNL)

Parameters	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Normative Annual Plant Availability Factor (%)	85%	85%	85%	85%	85%
Normative Annual Plant Load Factor (%)	85%	85%	85%	85%	85%
Gross Station Heat Rate (kcal/kWh)	2503	2503	2503	2503	2503
Auxiliary Consumption (%)	9.50%	9.50%	9.50%	9.50%	9.50%
Secondary Fuel Oil Consumption (ml/kWh)	0.50	0.50	0.50	0.50	0.50

16.2 The Commission after prudence check may modify these norms of operations after considering the capital investments approved for any Renovation and Modernisation activities in these plants. However, under normal working scenario, the Commission may not review the norms of operations as mentioned in Clause 16.1 of these Regulations.

16.3 The norms of operation for generating stations other than the stations mentioned above shall be as under:

1. Normative Annual Plant Availability Factor (NAPAF): 85%;
2. Normative Annual Plant Load Factor (NAPLF) for Incentive: 85%;
3. Gross Station Heat Rate:

For Coal-based and lignite-fired Thermal Generating Stations:

SHR=1.05 x Design Heat Rate (kcal/kWh);

Where, the Design Heat Rate of the 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:

Particulars	**Values**						
Pressure Rating (kg/cm^2)	150	170	170	247	247	270	270
SHT/RHT (^{0}C)	535/535	537/537	537/565	537/565	565/593	593/593	600/600
Type of BFP	Electrical Driven	Turbine driven	Turbine driven	Turbine driven	Turbine driven	Turbine driven	Turbine driven
Max Turbine Cycle Heat rate (kcal/kWh)	1955	1950	1935	1900	1850	1810	1800
Minimum Boiler Efficiency							
Sub-Bituminous Indian Coal	0.86	0.86	0.86	0.86	0.86	0.865	0.865
Bituminous Imported Coal	0.89	0.89	0.89	0.89	0.89	0.895	0.895
Maximum Design Heat rate (kcal/kWh)							
Sub-Bituminous Indian Coal	2273	2267	2250	2222	2151	2105	2081
Bituminous Imported Coal	2197	2191	2174	2135	2078	2034	2022

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

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

Provided also that where the boiler efficiency is 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 if one or more Units were declared under commercial operation prior to April 01, 2021, the heat rate norms for those Units as well as Units declared under commercial operation on or after April 01, 2021, shall be lowest of the heat rate norms arrived at by above methodology and the norms specified in Clause 16.1 of these Regulations:

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 Units where the boiler feed pumps are electrically operated, the maximum design unit heat rate shall be 40 kcal/kWh lower than the maximum design unit heat rate specified above with turbine driven BFP.

For Gas-based/Liquid-based thermal generating Unit(s)/ block(s):

For Natural Gas = 1.05 x Design Heat Rate of the Unit/block (kcal/kWh)
For RLNG = 1.071 x Design Heat Rate of the Unit/block (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.

4. Auxiliary Energy Consumption:

For Coal-based generating stations with Natural Draft cooling tower or without cooling tower:

Sr.no.	Generating Station	Auxiliary Energy Consumption
1.	200 MW Series	8.50%
2.	300 MW and above Series with Steam driven Boiler Feed Pumps	5.75%
3.	300/330/350/500 MW Series with Electrically driven Boiler Feed Pumps	8.00%

Provided that for thermal generating stations with induced draft cooling towers, the norms shall be further increased by 0.5%:

Provided further that additional auxiliary energy consumption as follows shall be allowed for plants with Dry Cooling Systems:

Sr.no.	Type of Dry Cooling System	Type of Dry Cooling System
1.	Direct cooling air cooled condensers with mechanical draft fans	1.0%

Sr.no.	Type of Dry Cooling System	Type of Dry Cooling System
2.	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.

For Gas Turbine/Combined Cycle generating stations:

Sr.no.	Generating Station	Auxiliary Energy Consumption
1.	Combined Cycle	2.5%
2.	Open Cycle	1.0%

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

5. Secondary Fuel Oil Consumption:

For Coal-based generating stations: 0.50 ml/kWh**;**

For Lignite-fired generating stations: 1.00 ml/kWh

16.4 Operational norms specified in these Regulations are the ceiling norms and shall not preclude the Generating Company and the beneficiaries 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. The Generating Company and the beneficiaries are required to provide the detail of such improved norms before the Commission.

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

A 17. Methodology for calculation of Capacity Charge & Energy Charge for Thermal Generating Stations

Computation and Payment of Capacity Charge for Thermal Generating Stations

17.1 The Fixed Cost of a thermal generating station shall be computed on annual basis, based on 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.

17.2 The full Capacity Charges shall be recoverable at Normative Annual Plant Availability Factor (NAPAF) specified in Clause 16.1 and Clause 16.3 of these Regulations. Further, the recovery of Capacity Charges below the level of Normative Annual Plant Availability Factor (NAPAF) will be on a pro-rata basis. At zero availability, no Capacity Charges shall be payable.

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

CC1=(AFC/12)(PAF1/NAPAF) subject to ceiling of (AFC/12);
CC2=((AFC/6)(PAF2/NAPAF) subject to ceiling of (AFC/6))-CC1;
CC3=((AFC/4)(PAF3/NAPAF) subject to ceiling of (AFC/4))-(CC1+CC2);
CC4=((AFC/3)(PAF4/NAPAF) subject to ceiling of (AFC/3))-(CC1+CC2+CC3);
CC5=((AFCx5/12)(PAF5/NAPAF) subject to ceiling of (AFCx5/12))-(CC1+CC2+CC3 +CC4);
CC6=((AFC/2)(PAF6/NAPAF) subject to ceiling of (AFC/2))-(CC1+CC2+CC3+CC4 + CC5)
CC7=((AFCx7/12)(PAF7/NAPAF) subject to ceiling of (AFCx7/12))-(CC1+CC2+CC3 +CC4+CC5+CC6);
CC8=((AFCx2/3)(PAF8/NAPAF) subject to ceiling of (AFCx2/3))-(CC1+CC2 +CC3 +CC4 +CC5+CC6+CC7);
CC9=((AFCx3/4)(PAF9/NAPAF) subject to ceiling of (AFCx3/4))-(CC1+CC2 +CC3+CC4+ CC5+CC6+CC7+CC8);
CC10=((AFCx5/6)(PAF10/NAPAF) subject to ceiling of (AFCx5/6))-(CC1+CC2+CC3 +CC4+CC5+CC6+CC7+CC8+CC9);
CC11=((AFCx11/12)(PAF11/NAPAF) subject to ceiling of (AFCx11/12))-(CC1+CC2+CC3 +CC4+CC5+CC6+CC7+CC8+CC9+CC10);
CC12=((AFC)(PAFY/NAPAF) subject to ceiling of (AFC))-(CC1+CC2+CC3+CC4+CC5+ CC6+CC7+CC8+CC9+CC10+CC11):

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 Operation and Maintenance expenses and interest on loan only;

Where,
AFC = Annual Fixed Cost, specified for the year (in Rupees);
NAPAF = Normative Annual Plant Availability Factor (%);
PAFM = Plant Availability Factor achieved up to the end of n^{th} month (%);
PAFY = Plant Availability Factor achieved during the Year (%).

CC1, CC2, ..…CC12 are the Capacity Charges of 1^{st}, 2^{nd} …… and 12^{th} months, respectively.

17.4 The Plant Availability Factor achieved for the month (PAFM) shall be computed in accordance with the following formula:

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

Where,
Aux**:** Normative Auxiliary Energy Consumption (%);
DC_i: Average Declared Capacity (in ex-bus MW), for the i^{th} time block in such period;
IC: Installed Capacity (in MW) of the generating station;
N: Number of time blocks in the given period.

17.5 In addition to the capacity charge, an incentive shall be payable to a generating station or Unit thereof at a flat rate of 50 paise/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF).

17.6 In case of fuel shortage in a thermal generating station, the Generating Company may propose to deliver a higher MW during peak-load hours by saving fuel during off-peak hours. The SLDC may then specify a pragmatic day-ahead schedule for the generating station to optimally utilize its MW and energy capability, in consultation with the Beneficiaries. DCi in such an event shall be taken to be equal to the maximum peak-hour ex-power plant MW schedule specified by the SLDC for that day.

Computation and Payment of Energy Charge for Thermal Generating Stations

17.7 The energy (variable) charge shall cover primary fuel and secondary fuel costs 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 specified energy charge rate of the month (with fuel price adjustment and limestone adjustment). The 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)

17.8 Energy Charge Rate (in Rs./kWh) on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

For coal-based stations and lignite fired stations:

Energy Charge Rate (ECR) = {(SHR - SFC x CVSF) x LPPF / (CVPF + SFC x LPSFi + LC x LPL} / (1 – Aux)

For gas and liquid fuel-based stations

ECR = GHR x LPPF / {CVPF x (1 – Aux)}

Where,

Aux: Normative auxiliary energy consumption (%);

CVPF: (a)Weighted Average Gross calorific value of coal as received, in kcal per kg for coal based stations;

(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 (kcal/ml);

ECR - Energy Charge Rate (Rs./kWh);

SHR - Gross Station Heat Rate (kcal/kWh);

LC = Normative limestone consumption (kg/kWh);

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

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

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

SFC - Specific fuel oil consumption, in ml per kWh.

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

17.9 The Generating Company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel, i.e., domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel, etc.:

Provided that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and the weighted average GCV of the fuels as received shall also be provided separately, 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, i.e., domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel, etc., and 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. The details should be available on its website on monthly basis for a period of three months.

17.10 The landed fuel cost of primary fuel and secondary fuel for tariff determination shall be based on actual weighted average cost of primary fuel and secondary fuel of the three preceding months, and in the absence of landed costs for the three preceding months, latest procurement price of primary fuel and secondary fuel for the generating station, before the start of the Control period for existing stations and immediately preceding three months in case of new generating stations shall be taken into account.

17.11 The landed cost of fuel for the month shall include price of fuel corresponding to the grade and quality of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/road or any other means, and, for the purpose of computation of energy charge, and in case of coal/lignite shall be arrived at after considering normative transit and handling losses as percentage of the quantity of coal or lignite dispatched by the coal or lignite supply company during the month as given below:

Pithead generating stations: 0.2%
Non-pithead generating stations: 0.8%

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

Provided further that in case of imported coal, the transit and handling losses shall be 0.2%.

Fuel Price Adjustment

17.12 The Fuel Price Adjustment (FPA) applicable for calculation of Energy Charges is as follows:

a) For coal-based generating stations, FPA = A + B

Where,

FPA – Fuel price Adjustment for a month in Paise/kWh sent out;

A – Fuel price adjustment for Secondary Fuel oil in Paise/kWh sent out;

B – Fuel price adjustment for Coal in Paise/kWh sent out;

$A=\{10/(100-AC_n)\}*SFC_n*(P_{om}-P_{os})$

$B=\{10/(100-AC_n)\}*[SHR_n*\{(P_{cm}/K_{cm}) - (P_{cs}/K_{cs})\}- SFC_n*\{(K_{om*}P_{cm}/ K_{cm}) – (K_{oms*}P_{cs}/ K_{cs})\}]$

Where,

SFC_n = Normative Specific Fuel Oil consumption in L/kWh;

SHR_n = Normative Gross Station Heat Rate in kcal/kWh;

AC_n = Normative Auxiliary consumption, in absolute term (if normative aux is 10%, then absolute value i.e. 10, to be considered;

P_{om} = Weighted average price of fuel oil on as consumed basis during the month in Rs. /kL;

K_{om} = Weighted average Gross Calorific Value of fuel oils fired for the month in kcal/Litre;

P_{os} = Base value of price of fuel oils as taken for determination of base energy charge in the Tariff Order in Rs./kL;

K_{os} = Base value of Gross Calorific Value of fuel oils as taken for determination of base energy charge in the Tariff Order in kcal/Litre;

P_{cm} = Weighted average price of coal procured and burnt during the month at the power station in Rs. / MT;

K_{cm} = Weighted average Gross Calorific Value of coal fired at boiler front for the month in kcal/kg;

P_{cs} = Base value of price of coal as taken for determination of base energy charge in the Tariff Order in Rs. /MT;

K_{cs} = Base value of gross calorific value of coal as taken for determination of base energy charge in the Tariff Order in kcal/kg.

b) For gas based thermal power plants, the Fuel Price Adjustment is calculated using the following formula:

$$FPA = \frac{10 * SHR_n * [(P_m/K_m) - (P_s/K_s)]}{(100 - AC_n)}$$

Where:
FPA = Fuel Price Adjustment for a month in Paise/kWh sent out;

SHR_n = Normative Gross Station Heat Rate expressed in kcal/kWh;

AC_n = Normative Auxiliary Consumption, in absolute term (if normative aux is 10%, then absolute value i.e. 10, to be considered;

P_m = Weighted average price of Gas or Liquid fuel as per PSL for the month in Rs. / 1000 SCM of Rs./ KL or Rs./MT;

K_m = Weighted average Gross Calorific Value of Gas or Liquid fuel for the month in Kcal/ SCM or kcal/ Litre or kcal/kg;

P_s = Base price of Gas or Liquid fuel as taken for determination of base energy charge in tariff order in Rs. / 1000 SCM of Rs./kL or Rs./MT;

K_s = Base value of Gross Calorific Value of Gas or Liquid fuel as taken for determination of base energy charge in tariff order in kcal/ SCM or kcal/Litre or kcal/ Kg.

17.13 Any variation in fuel prices on account of change in the Gross Calorific Value (GCV) of coal or gas or liquid fuel shall be adjusted on a monthly basis on the basis of weighted average GCV of coal or gas or liquid fuel in stock, received and burnt and weighted average landed cost incurred by the Generating Company for procurement of coal, oil, or gas or liquid fuel, as the case may be for a power station.

17.14 Initially, the Base value of price of fuel oils, price of coal incurred by the Generating Company/ generating station shall be taken based on actuals of the weighted average price of the three preceding months and in the absence of weighted average landed costs for the three preceding months, latest respective weighted average procurement price for the generating station, before the start of the year.

17.15 Initially the Base value of gross calorific value of fuel oils and gross calorific value of coal incurred by the Generating Company/ generating Station shall be taken based on actuals of the weighted average gross calorific value of the three preceding months and in the absence of weighted average gross calorific value for the three preceding months, latest weighted average gross calorific value for the generating station, before the start of the year.

17.16 In its bills, the Generating Company shall separately indicate rate of energy charges at base price of primary and secondary fuel specified by the Commission and the fuel price adjustment. No separate Petition needs to be filed with the Commission for fuel price adjustment.

17.17 Under/Over Recovery on account of limestone/reagent consumption in case of stations having FGD system shall be trued up annually as per actuals.

Load Despatch & Transmission Charges

17.18 The Generating Company shall be allowed to recover from beneficiaries net transmission and load despatch charges payable to the Transmission Licensees (Central Transmission Utility, State Transmission Utility, etc.) and System Operators (Regional Load Despatch Centre, State Load Despatch Centre, etc.) for access to and use of the Inter-State transmission system, Intra-State transmission system and availing load despatch services assuming maximum normative rebate available from each source for payment of bills on presentation of bills in accordance with the tariffs approved from time to time by Central Electricity Regulatory Commission and the appropriate State Commission, as the case may be.

A 18. Norms of Operation for Hydro Power Generating Station

18.1 The norms of operation for hydro power station shall be as under:

18.2 **Normative Annual Plant Availability Factor (NAPAF)**: The Normative Annual Plant Availability Factor for hydro generating stations shall be determined by the Commission as per the following criteria:

a) Storage and pondage type plants with head variation between full reservoir level (FRL) and Minimum Draw Down Level (MDDL) of up to 8% and where plant availability is not affected by silt: 90%;
b) Storage and pondage type plants with head variation between full reservoir level and minimum draw down level of more than 8% and where plant availability is not affected by silt: Plant-specific allowance to be provided in NAPAF for reduction in NAPAF and MW output capability as reservoir level falls over the months. As a general guideline, the allowance on this account in terms of multiplying factor may be worked out from the projection of annual average of net head, applying the formula:

   = (Average head/Rated head) +0.02

   Alternatively, in case of a difficulty in making such projection, the multiplying factor may be determined as:

   = (Head at MDDL/Rated head) x 0.5 + 0.52

c) Pondage type plants where plant availability is significantly affected by silt: 85%;
d) Run of river type plants: NAPAF to be determined plant-wise, based on 10-day design energy data, moderated by past experience where available/relevant.

18.3 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.

18.4 In case of a new hydroelectric project, the developer shall have the option of approaching the Commission in advance for fixation of NAPAF based on the principles enumerated in Clause 18.2 and Clause 18.3 of these Regulations.

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

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

18.6 Auxiliary Energy Consumption (AUX): The norms for auxiliary energy consumption shall be as under:

Sr.no.	Type of Station	Auxiliary Energy Consumption	
		Installed Capacity above 200 MW	Installed Capacity upto 200 MW
1.	**Surface**		
	Rotating Excitation	0.7%	0.7%
	Static	1.0%	1.2%
2.	**Underground**		
	Rotating Excitation	0.9%	0.9%
	Static	1.2%	1.3%

18.7 Based on the above, the norms of operation for the hydro generating station already in operation shall be as follows:

Sikidiri Hydel Power Station:

Parameters	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Normative Annual Plant Availability Factor (%)	75%	75%	75%	75%	75%
Auxiliary Consumption (%)	0.70%	0.70%	0.70%	0.70%	0.70%

A 19. Methodology for calculation of Capacity Charge & Energy Charge for Hydro Generating Stations

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

19.1 The Annual Fixed Cost of a Hydro generating station shall be computed, based on norms specified under these Regulations, and recovered on monthly basis under capacity charge (inclusive of incentive) and energy charge, which shall be payable by the Beneficiaries in proportion to their respective allocation in the saleable capacity of the generating station, that is to say, in the capacity excluding the free power to the home State:

Provided that during the period between the date of Commercial Operation of the first Unit of the generating station and the Date of Commercial Operation of the generating station, the Annual Fixed Cost shall 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 payable during such period.

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

Capacity Charge (inclusive of incentive) = AFCx0.5xNDM/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:

Provided that the revenue recovered through capacity charges shall not exceed 50% of the Annual Fixed Charges determined.

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

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

Where,

Aux**:** Normative auxiliary energy consumption in percentage;

DC_i: Declared Capacity (in ex-bus MW) for the i^{th} Day of the month, which the station can deliver for at least three (3) hours, as certified by the State Load Despatch Centre after the Day is over;

IC**:** Installed Capacity (in MW) of the complete generating station;

N**:** Number of Days in the month.

19.4 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 power plant 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 - FEHS) / 100.

19.5 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 Clause 19.9 of these Regulations:

ECR = AFC x 0.5 x 10 / {DE x (100 - AUX) x (100 - FEHS)}

Where,

DE**:** Annual Design Energy specified for the Hydro generating station, in MWh, subject to the provision in Clause 19.6 of these Regulations;

FEHS**:** Free Energy for home State, as defined in Clause 22.2 of these Regulations.

19.6 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 Company, the treatment shall be as per Clause 19.7 of these Regulations, on an application filed by the Generating Company.

19.7 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.

19.8 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 Financial Year, which was beyond the control of the generating station and which could not be recovered during the said Financial Year shall be recovered in accordance with Clause 19.7 of these Regulations.

19.9 In case the Energy Charge Rate (ECR) for a Hydro generating station, as computed in Clause 19.5 of these Regulations, exceeds Rs. 0.80/kWh, and the actual saleable energy in a Year exceeds {DE x (100 - AUX) x (100 - FEHS) / 10000} MWh, the Energy charge for the energy in excess of the above shall be billed at Rs. 0.80/kWh only.

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

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

19.11 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.

19.12 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.

19.13 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 (DE_m) + 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month)} x (1 - FEHS);

Where,
DE_m**:** Design energy for the month specified for the hydro generating station in MWh
FEHS**:** Free energy for home State, in percentage:

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.

19.14 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, 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 total machine outages in a year exceeds 15%:

(ACC)adj = (ACC) R x (1- ATO)/0.85

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.

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

CHAPTER-V

SCHEDULING, ACCOUNTING, BILLING AND PAYMENT

A 20. Scheduling

20.1 The methodology for scheduling and dispatch for the generating station shall be as specified in Grid Code as amended from time to time, as approved by the Commission.

A 21. Metering and Accounting

21.1 Metering arrangements, including installation, testing and operation and maintenance of meters and collection, transportation and processing of data required for accounting of energy exchanges and average frequency on 15-minute Time Block basis shall be organised by the State Transmission Utility in consultation with State Load Despatch Centre as per the Grid Code. All concerned entities (in whose premises the special energy meters are installed), shall fully cooperate with the State Transmission Utility/State Load Despatch Centre and extend the necessary assistance by taking weekly meter readings and transmitting them to the State Load Despatch Centre. The State Load Despatch Centre shall issue the Accounts for energy on monthly basis as well as UI charges on weekly basis.

Unscheduled Interchange (UI) Charges

21.2 All variations between actual net injection and scheduled net injection for the generating stations, and all variations between actual net drawl and scheduled net drawl for the Beneficiaries shall be treated as their respective Unscheduled Interchanges (UI), charges for which shall be governed by Jharkhand State Electricity Regulatory Commission (State Grid Code) Regulations, 2008 and subsequent amendments thereof or any relevant Regulations specified by the Commission from time to time.

A 22. Billing and Payment of Charges

22.1 Bills shall be raised for Capacity Charge and Energy Charge on monthly basis by the Generating Company in accordance with these Regulations, and payments shall be made by the Beneficiaries directly to the Generating Company.

22.2 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 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 in the saleable capacity (to be determined after deducting the capacity corresponding to free energy to home State as per Note 1 herein).

Note 1:
FEHS - Free Energy for Home State, in per cent shall be taken as 13% (not applicable for generating stations of the State):

Provided that in cases where the site of a Hydro Project is awarded to a developer (not being a State controlled or owned Company), by a State Government by following a two-stage transparent process of bidding, the "Free Energy" shall be taken as 13%, which shall also include energy corresponding to 100 Units of electricity to be provided free of cost every month to every Project affected family for a period of 10 Years from the Date of Commercial Operation of the generating station.

Late Payment Surcharge

22.3 In case the payment of any bill for charges payable under these Regulations is delayed by a Beneficiary beyond a period of 60 days from the date of billing a late payment surcharge at the rate of 1.25% per month shall be levied by the Generating Company.

Rebate

22.4 For payment of bills of the Generating Company (Capacity Charge and Energy Charges) within 5 days of presentation of bills by the Generating Company, a rebate of 2.00% shall be allowed.

22.5 If the payment by the Beneficiary after 5 days and within a period of 30 days of presentation of bills by the Generating Company, a rebate of 1.00% shall be allowed.

22.6 No rebate on payment of the bills after 30 days of presentation of bills by the Generating Company.

Note: 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 Authorized Signatory or Representative of the Beneficiary, for the purpose of receipt or acknowledgement of Bill is situated).

CHAPTER -VI

PROCEDURE FOR FILING OF ARR AND TARIFF

A 23. Multi-Year Tariff Filing Procedure

23.1 The Multi Year Tariff filing shall be submitted as per directions by the Commission in these Regulations and in the manner as per the provisions of JSERC (Conduct of Business) Regulations, 2016, as amended or replaced from time to time.

23.2 The Generating Company shall also submit the MYT filing in electronic format to the Commission.

23.3 The Generating Company shall file the MYT Petition and related documents for approval for the Control Period in accordance with the MYT framework and the timelines specified in **Section A 39** of these Regulations failing which:

a) The Commission may issue the MYT order suo-motu;
b) The Commission shall disallow the return on equity to the Generating Company.

Before the Start of the Control Period

23.4 The Generating Company shall file for the Commission's approval, as per the Timelines specified in **Section A 39**, a Business Plan and MYT Petition in accordance with Clause 6.5 to Clause 6.10 of these Regulations.

Annual Tariff Filings for the Control Period

23.5 The Generating Company shall file a Petition for approval of tariff for each year of the Control Period, as per the timelines specified in **Section A 39** of these Regulations, before the commencement of each year of the Control Period.

A 24. Disposal of Application

24.1 The Commission shall process the filings made by the Generating Company in accordance with these Regulations and JSERC (Conduct of Business) Regulations, 2016 and its amendments thereof.

24.2 Based on the Generating Company's filings, objections/suggestions from public and other stakeholders, the Commission may accept the application with such modifications and/or such conditions as may be deemed just and appropriate and issue, within 120 days of the receipt of the Petition and after considering all suggestions and objections from public and other stakeholders, an order containing, inter alia, trued up revenue and cost components for the year preceding the Base Year, estimation of parameters for the Base Year and determination of ARR and tariff for the Control Period.

A 25. Periodic Reviews

Review during the Control Period

25.1 To ensure smooth implementation of the Multi Year Tariff (MYT) Framework, the Commission may undertake periodic reviews of Generating Company's performance during the Control Period, to address any practical issues, concerns or unexpected outcomes that may arise.

25.2 The Generating Company shall submit the Annual Performance Review report as part of annual review on actual performance as per the timelines specified in the **Section A 39** of these Regulations to assess the performance vis-à-vis the targets approved by the Commission at the beginning of the Control Period. This shall include annual statements of its performance and accounts including audited/authenticated accounts, norms achieved and the tariff worked out in accordance with these Regulations.

25.3 The Generating Company shall also submit the True up of ARR and corresponding tariff adjustments as per the timelines specified in the **Section A 39** of these Regulations. The revised estimates shall be required to true-up the costs on account of uncontrollable variations, profit sharing mechanism for exceeding the targets.

25.4 The Commission may also specify any modifications to the forecast of the Generating Company for the remainder of the Control Period, with detailed reasons for the same.

Review at the end of the Control Period

25.5 Towards the end of the Control Period, the Commission shall seek to review whether the implementation of the principles laid down in these Regulations has achieved their intended objectives. While doing this, the Commission shall take into account, among other things, the industry structure, sector requirements, consumer and other stakeholder expectations and Generating Company's requirements at that point in time. Depending on the requirements of the sector to meet the objects of the Act, the Commission may revise the principles for the next Control Period.

25.6 The end of the Control Period shall be the beginning of the next Control Period and the Generating Company shall follow the same procedure unless specified otherwise by the Commission.

25.7 The Commission shall analyse the performance of the Generating Company with respect to the targets set out at the beginning of the Control Period and based on the actual performance, expected efficiency improvements and other factors prevalent, determine the initial values for the next Control Period.

CHAPTER-VII

MISCELLANEOUS PROVISIONS

A 26. Sharing of Clean Development Mechanism Benefits

26.1 The proceeds of carbon credit from approved Clean Development Mechanism project shall be shared in the following manner:-

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

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

A 27. Foreign Exchange Rate Variation

27.1 The Generating Company may hedge foreign exchange exposure in respect of the interest and repayment of foreign currency loan taken for the generating station, in part or full at their discretion.

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

27.3 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.

27.4 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 or its suppliers or contractors.

27.5 The Generating Company shall recover the cost of hedging and Foreign Exchange Rate variation on Year-to-Year basis as income or expense in the period in which it arises.

A 28. Recovery of Application Fee & Publication Expenses and Statutory Charges

28.1 The Generating Company shall be allowed to recover the Statutory Charges imposed by the State and Central Government such as electricity duty, water cess and payment to the pollution control board in addition to Application Filing Fee and Publication Expenses, subject to prudence check by the Commission. The Generating Company is required to furnish the details regarding the same along with the Petition.

A 29. Issue of Orders and Practice Directions

29.1 Subject to the provisions of the Act and these Regulations, the Commission may, from time to time, issue Orders and Practice Directions in regard to the implementation of these Regulations and procedure to be followed on various matters, which the Commission has been empowered by these Regulations to direct, and matters incidental or ancillary thereto.

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

A 30. Non-Compliance of Directions

30.1 State Load Despatch Centre may give such directions and exercise such supervision and control as may be required for ensuing integrated operation of the power system for achieving maximum economy and efficiency and every Licensee, Generating Company, sub-station and any other person connected with the operation of the power system shall comply with such directions.

30.2 If any Generating Company fails to comply with the directions issued, it shall be liable to a penalty not exceeding Rs. 5 Lakh.

A 31. Dispute Resolution

31.1 In case of dispute, any of the parties may make an application in accordance with the JSERC (Conduct of Business) Regulations, 2016, as amended from time to time, including statutory re- enactment thereof, for settlement of the dispute.

A 32. Power to remove difficulties

32.1 In case of any difficulty in giving effect to any of the provisions of this Regulation, the Commission may by general or special order, issue appropriate directions to Generating Company to take suitable action, not being inconsistent with the provisions of the Act, which appear to the Commission to be necessary or expedient for the purpose of removing the difficulty.

32.2 The Generating Company may file a Petition before the Commission and seek suitable orders to remove any difficulties that may arise in implementation of these Regulations.

A 33. Power of relaxation

33.1 The Commission may in public interest and for reasons to be recorded in writing, relax any of the provision of these Regulations.

A 34. Interpretation

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

A 35. Savings of Inherent Powers of the Commission

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

A 36. Enquiry and Investigation

36.1 All enquiries, investigations and adjudications under these Regulations shall be done by the Commission through the proceedings in accordance with the provisions of the JSERC (Conduct of Business) Regulations, 2016, as amended from time to time.

A 37. Power to amend

37.1 The Commission may from time to time add, vary, alter, suspend, modify, amend or repeal any provisions of this Regulation.

A 38. Savings

38.1 Nothing in these Regulations shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary to meet the ends of justice or to prevent abuse of the process of the Commission.

38.2 Nothing in these Regulations shall bar the Commission from adopting in conformity with the provisions of the Act a procedure, which is at variance with any of the provisions of these Regulations, if the Commission, in view of the special circumstances of a matter or class of matters and for reasons to be recorded in writing, deems it necessary or expedient for dealing with such a matter or class of matters.

38.3 Nothing in these Regulations shall, expressly or impliedly, bar the Commission dealing with any matter or exercising any power under the Act for which no Regulations or Regulations have been framed, and the Commission may deal with such matters, powers and functions in a manner it thinks fit.

(By order of the Commission)

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Secretary

Jharkhand State Electricity Regulatory Commission

A 39. Summary of Timeline

Sl. No.	Description	Filing of the Document by the Generating Company	Furnishing additional information as sought by the Commission	Disposal of the Application by the Commission
1.	Business Plan for the Control Period and MYT Petition including tariff for each year of the Control Period FY 2021-22 to FY 2025-26.	November 30, 2020	Within 30 days of filing of document	Within 120 days of acceptance of the filing
2.	True-Up for the previous year, Annual Performance Review for the current year and ARR & Tariff Determination for the next year of the Control Period	November 30, of the financial year for which APR has been sought	Within 30 days of filing of document	Within 120 days of acceptance of the filing

APPENDIX-I: DEPRECIATION SCHEDULE

Asset Description	Straight Line Depreciation (%)
Land owned under full ownership	0.00
Land held under lease:	
For investment in the land	2.67
For cost of clearing the site	2.67
Land for reservoir in case of hydro generating station	2.67
Assets Purchased New:	
Plant & Machinery in generating stations	
Hydro electric	4.22
Steam electric NHRB & waste heat recovery boilers	4.22
Diesel electric and gas plant	4.22
Cooling towers & circulating water systems	4.22
Hydraulic works forming part of the Hydro-generating stations	
Dams, Spillways, Weirs, Canals, Reinforced concrete flumes and siphons	4.22
Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge tanks, hydraulic control valves and hydraulic works	4.22
Building & Civil Engineering works	
Offices and showrooms	2.67
Containing thermo-electric generating plant	2.67
Containing hydro-electric generating plant	2.67
Temporary erections such as wooden structures	100
Roads other than Kutcha roads	2.67
Others	2.67
Transformers, Kiosk, sub-station equipment & other fixed apparatus (including plant)	
Transformers including foundations having rating of 100 kVA and over	4.22
Others	4.22
Switchgear including cable connections	4.22
Lightning arrestor	
Station type	4.22
Pole type	4.22
Synchronous condenser	4.22
Batteries	4.22

Underground cable including joint boxes and disconnected boxes	4.22
Cable duct system	4.22
Overhead lines including cable support	
Lines on fabricated steel operating at terminal voltages higher than 66 kV	4.22
Lines on steel supports operating at terminal voltages higher than 13.2 kV but not exceeding 66 kV	4.22
Lines on steel on reinforced concrete support	4.22
Lines on treated wood support	4.22
Meters	4.22
Self-propelled vehicles	7.60
Air Conditioning Plants	
Static	4.22
Portable	7.60
Furniture and Furnishing	
Office furniture and furnishing	5.06
Office equipment	5.06
Internal wiring including fittings and apparatus	5.06
Street Light fittings	4.22
Apparatus let on hire	
Other than motors	7.60
Motors	5.06
Communication equipment	
Radio and high frequency carrier system	5.06
Telephone lines and telephones	5.06
Fibre Optic	5.06
I.T Equipment including software	12.00
Any other assets not covered above	4.22 (or as approved by the Commission considering asset life and residual value)