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**JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION, RANCHI  
( TERMS AND CONDITIONS OF TARIFF DETERMINATION, MULTI-YEAR TARIFF  
FRAMEWORK ) REGULATION, 2007**

The 3rd July, 2007

No. – 200--In exercise of the powers conferred under Section 61 of the Electricity Act, 2003 (hereinafter referred to as the Act), and all other powers enabling in this behalf, the Jharkhand State Electricity Regulatory Commission (hereinafter referred to as the JSERC or the Commission) hereby makes the following regulations.

**1. Short title, extent and commencement**

- 1.1 These Regulations may be called the JSERC (Terms and Conditions of tariff determination, Multi-Year Tariff Framework) Regulation, 2007.
- 1.2 These Regulations shall extend to the entire state of Jharkhand and to all matters within the jurisdiction of the Commission.
- 1.3 These Regulations shall come into force from the date of their publication in the Official Gazette.

**2. Definitions**

Unless the context otherwise requires for the purpose of this chapter,

- (i) "Accounting Statement" means for each financial year, the following statements, namely –
  - a. balance sheet, prepared in accordance with the form contained in Part I of Schedule VI to the Companies Act, 1956;
  - b. profit and loss account, complying with the requirements contained in Part II of Schedule VI to the Companies Act, 1956;

- c. cash flow statement prepared in accordance with the Accounting Standards on Cash Flow Statement (AS-3) of the Institute of Chartered Accountants of India;
  - d. report of the statutory auditors including the audit report;
  - e. cost records prescribed by the Central Government under Section 209 (1) (d) of the Companies Act, 1956;
  - f. Cost Accounting Standards;
- (ii) 'Act' means the Electricity Act, 2003
  - (iii) 'Applicant' means a Licensee or Generating Company who has made an application for determination of tariff or an application for annual performance review in accordance with the Act and these Regulations; and includes a Licensee or Generating Company whose tariff is the subject to a review by the Commission either suo motu or on a petition filed by any interested or affected person or as part of an annual performance review;
  - (iv) "Aggregate Revenue Requirement or ARR" means the revenue required to meet the costs pertaining to the Generating Company or licensed business, for a financial year/years as the case may be, which will be permitted to be recovered through tariffs and charges by the Commission;
  - (v) "Annual Performance Review" will be a detailed annual review of the licensees' performance during the control period that will be undertaken by the Commission, to address any practical issues, concerns or unexpected outcomes that may arise, and in general for the sake of monitoring and regulatory control. The Commission at the end of each financial year of the Control Period shall undertake the Annual Performance Review, subject to a review of this practice at the end of the first control period;
  - (vi) "Auxiliary Consumption" in relation to a period, means the quantum of energy consumed by auxiliary equipment of the generating station and shall be expressed as a percentage of the sum of gross energy generated at the generator terminals of all the units of the generating station: and, for the purpose of these Regulations, auxiliary consumption for a thermal generating station shall include transformer losses within the generating station;
  - (vii) "Availability" in relation to a thermal generating station for any period means the average of the daily average declared capacities for all the days during that period expressed as a percentage of the installed capacity of the generating station minus normative auxiliary consumption in MW, as specified in these Regulations, and shall be computed in accordance with the following formula:

$$\text{Availability} = 10000 \times \frac{\sum_{i=1}^N D_{ci}}{\{N \times IC \times (100 - \text{AUX}_n)\}} \%$$

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

D<sub>ci</sub> = Average Declared Capacity for the ith time block in such period

IC = Installed Capacity of the generating station in MW

AUX<sub>n</sub> = Normative Auxiliary Consumption in MW in the ith time block, expressed as a percentage of gross generation

- (viii) "Availability" in relation to a transmission system for a given period means the time in hours during that period the transmission system is capable of transmitting electricity at its rated voltage expressed in percentage of total hours in the given period;

- (ix) “Commission” means the Jharkhand State Electricity Regulatory Commission;
- (x) “Controllable Factors” means those factors that are within the control of the applicant or licensee and are deemed as manageable;
- (xi) “Control Period” means a multi-year period fixed by the Commission from time to time, usually five (5) years, for which the principles for determination of revenue requirement will be fixed, the first control period, however, being of duration three (3) years;
- (xii) “Declared Capacity” means-
  - a. For a thermal generating station, the capability of the generating station to deliver ex-bus electricity in MW declared by such generating station in relation to any period of the day or whole of the day, duly taking into account the availability of fuel:
 

Provided that in case of a gas turbine generating station or a combined cycle generating station, the generating station shall declare the capacity for units and modules on gas fuel and liquid fuel separately, and these shall be scheduled separately. Total declared capacity and total scheduled generation for the generating station shall be the sum of the declared capacity and scheduled generation for gas fuel and liquid fuel for the purpose of computation of availability and Plant Load Factor respectively;
  - b. For run-of-river hydro power generating stations with poundage and storage-type power stations, the ex-bus capacity in MW expected to be available from the generating station over the peaking hours of the next day, as declared by the generating station, taking into account the availability of water, optimum use of water and availability of machines and for this purpose, the peaking hours shall not be less than three (3) hours within a twenty-four (24) hour period;
  - c. For purely run-of-river hydro power generating stations, the ex-bus capacity in MW expected to be available from the generating station during the next day, as declared by the generating station, taking into account the availability of water, optimum use of water and availability of machines;
- (xiii) “Distribution Business” means the business of operating and maintaining a distribution system supplying electricity in the area of supply of the Distribution Licensee in terms of the Distribution License granted by the Commission
- (xiv) “Expected Revenue from Tariff and Charges” means the revenue estimated to accrue to the Licensee from the Licensed Business at the prevailing tariffs and charges;
- (xv) “Force Majeure Event” means, with respect to any party, any event or circumstance which is not within the reasonable control of, or due to an act or omission of, that party and which, by the exercise of reasonable care and diligence, that party is not able to prevent, including, without limiting the generality of the foregoing:
  - a. acts of God, including but not limited to lightning, storm, action of the elements, earthquakes, flood, drought and natural disaster;
  - b. strikes, lockouts, go-slow, bandh or other industrial disturbances;
  - c. acts of public enemy, wars (declared or undeclared), blockades, insurrections, riots, revolution, sabotage, vandalism and civil disturbance;
  - d. unavoidable accident, including but not limited to fire, explosion, radioactive contamination and toxic dangerous chemical contamination;
  - e. any shutdown or interruption of the grid, which is required or directed by the State or Central Government or by the Commission or the State Load Despatch Centre; and

- f. any shut down or interruption, which is required to avoid serious and immediate risks of a significant plant or equipment failure;
- (xvi) “Generation Business” means the business of production of electricity from a generating station for the purpose of giving supply to any premises or enabling a supply to be so given;
- (xvii) “Gross Station Heat Rate” means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals;
- (xviii) “Installed Capacity” means the summation of the name plate capacities of all the units of the generating station or the capacity of the generating station (reckoned at the generator terminals) as approved by the Commission from time to time;
- (xix) “Licensee” means a person who has been granted a license by the Commission to –
- transmit electricity as a transmission licensee, or
  - distribute electricity as a distribution licensee
- (xx) “Maximum Available Capacity” means the following:
- Run-of- river power station with poundage and storage type power stations.  
The maximum capacity in MW, the generating station can generate with all units running, under the prevailing conditions of water levels and flows, over the peaking hours of next day,  
*Explanation - The peaking hours for this purpose shall not be less than 3 hours within a 24 hours period.*
  - Purely run-of-river power stations  
The maximum capacity in MW, the generating station can generate with all units running, under the prevailing conditions of water levels and flows over the next day.
- (xxi) “Plant Load Factor”, for a given period, means the total sent-out energy corresponding to scheduled generation during such period, expressed as a percentage of sent out energy corresponding to installed capacity in that period and shall be computed in accordance with the following formula:
- $$\text{Plant Load Factor (\%)} = \frac{10000 \times \sum_{i=1}^N \text{SG}_i}{\{N \times \text{IC} \times (100 - \text{AUX}_n)\}} \%$$
- where –
- N = number of time blocks in the given period
- SG<sub>i</sub> = Scheduled Generation in MW for the i<sup>th</sup> time block in such period
- IC = Installed Capacity of the generating station in MW
- AUX<sub>n</sub> = Normative Auxiliary Consumption in MW in i<sup>th</sup> time block ,expressed as a percentage of gross generation
- (xxii) “Rated Voltage” means the manufacturer’s design voltage at which the transmission system is designed to operate or such lower voltage at which the line is charged, for the time being, in consultation with Transmission System Users;
- (xxiii) “Retail Supply Business” means the business of sale of electricity by a Distribution Licensee to his consumers in accordance with the terms of his licence;
- (xxiv) “Run-of-river power station” means a hydropower generating station with or without upstream poundage;

- (xxv) "Scheduled Generation" at any time or for any given period or time block means the schedule of generation in MW ex-bus given by the State Load Despatch Centre;
- (xxvi) "Standards of Performance Regulations" means the regulations as may be specified by the Commission;
- (xxvii) "Transmission Business" means the business of establishing or operating transmission lines;
- (xxviii) "Uncontrollable Factors" for the purpose of these Regulations means, those factors which are beyond the control of, and cannot be mitigated by, the applicant, as determined by the Commission.
- (xxix) "Unit" in relation to a thermal generating station means steam generator, steam turbine, generator and auxiliaries and in relation to a combined cycle thermal generating station, means gas turbine, generator and auxiliaries.

### **3. Scope and extent of application**

- 3.1 These Regulations shall apply where a cost based tariff is determined by the Commission, including in the following cases:-
  - (i) Supply of electricity by a Generating Company to a Distribution Licensee as per the JSERC (Terms and conditions for Determination of Thermal Generation Tariff) Regulations, 2004
  - (ii) Distribution of electricity as per the JSERC (Terms and conditions for Distribution Tariff) Regulations, 2004
  - (iii) Any other regulation that shall be relevant for a multi-year tariff framework and that the Commission may notify from time to time
- 3.2 Notwithstanding anything contained in these Regulations, the Commission shall adopt the generation and transmission tariff if such tariff has been determined through a transparent process of bidding in accordance with the guidelines issued by the Central Government under Section 63 of the Act.

### **4. Multi-year tariff framework**

- 4.1 The Commission shall determine the tariff for matters covered under clauses (i), (ii) and (iii) of Regulation 3.1 above under a multi-year tariff framework with effect from such date that these regulations shall be notified by the Commission:

Provided that the Commission may, either suo-motu or upon application made to it by the applicant, exempt the determination of tariff of a Licensee or category of Licensees under the multi-year tariff framework for such period as may be contained in the Order granting such an exemption.
- 4.2 The multi-year tariff framework shall be based on the following elements, for calculation of ARR and expected revenue from tariff and charges:
  - (i) Control period, at the commencement of which a forecast of the ARR and expected revenue from existing tariffs and charges shall be submitted by the applicant and approved by the Commission;
  - (ii) applicant's forecast of ARR and expected revenue from tariffs and charges during the control period, based on reasonable assumptions relating to the expected behaviour of the relevant financial and operational variables;
  - (iii) trajectory for specific variables as may be stipulated by the Commission in subsequent regulations or in the first tariff order (whichever is earlier), that it issues for the Generating Company or Licensee after the issue of these Regulations, where

the performance of the applicant is sought to be improved through incentives and disincentives;

- (iv) annual review of performance vis-à-vis the approved forecast and categorization of variation in performance into those that were caused by factors within the control of the applicant (controllable factors) and those caused by factors beyond the control of the applicant (uncontrollable factors);
- (v) mechanism for pass-through of approved gains or losses on account of uncontrollable factors;
- (vi) mechanism for sharing of approved gains or losses arising out of controllable factors;
- (vii) Determination of annual tariff based on the trajectory stipulated by the Commission under clause (iii) of Regulation 4, above, for each financial year within the control period and based on the approved forecast and results of the annual performance review.

## 5. Applicability

- 5.1 The multi-year tariff framework shall apply to applications made for determination of tariff for generation, transmission, wheeling and distribution and supply of electricity in the State.

Provided that the Commission shall have regard to the terms and conditions of any approved power purchase agreement in specifying the trajectory for determination of generation tariff.

## 6. Application Timeline and Procedure

- 6.1 Every Generating Company or Licensee shall file an application for approval of its ARR for the Control Period, not less than 120 days before the commencement of the Control Period. This filing shall be in such form and such manner as specified and in accordance with the Guidelines issued by the Commission.

- 6.2 Licensees will publish a notice of their filings based on these tariff principles in at least two (2) English and two (2) local language daily newspapers widely circulated in the area to which the application pertains and make the filings available to the public. Based on a detailed review of the licensees' filings and taking into account the suggestions and views expressed in public hearings, the Commission will establish performance targets for licensees, applicable for the remaining years of the control period from the specified date.

- 6.3 Components of ARR and expected revenue from tariff and charges

### 6.3.1 Generation Business: ARR for Generation Business – The ARR filings shall contain the following:

- a. The Operation and Maintenance (O&M) costs which include employee-related costs, repairs & maintenance costs and administrative & general costs;
- b. Submission of the working capital requirement and a detailed scheme/project-wise Capital Investment Plan with a capitalisation schedule covering each year of the Control Period;
- c. A proposal for appropriate capital structure and its cost of financing (interest cost and return on equity). Details of depreciation and capitalization schedule for each year of the Control Period;

- d. Details of fuel cost in case of a thermal generating station with regard to coal and oil cost for each year of the Control Period;
  - e. Description of external parameters proposed for indexation;
  - f. Details of taxes on income;
  - g. Any other relevant expenditure;
  - h. Proposals for sharing of gains and losses;
  - i. Proposals for efficiency parameter targets;
  - j. Proposals for rewarding efficiency in performance; and
  - k. Any other matters considered appropriate
- 6.3.2 The filing for proposed tariff for determination of tariff/charges for Generation of electricity, i.e. Generation Tariff/Charges to recover the ARR of Generation Business, shall be made along with the ARR filing.
- 6.3.3 The application for filing for the proposed tariff of a Generation Business shall contain the following:
- a. Proposals for Non-Tariff Income with item-wise description and details;
  - b. Expected Revenue from the proposed Generation Tariff, Non-Tariff Income and other matters considered appropriate by the Generating Company.
- 6.3.4 **Transmission Business:** ARR for Transmission Business: - The ARR filings shall contain the following:
- a. The Operation and Maintenance (O&M) costs which include employee-related costs, repairs & maintenance costs and administrative & general costs;
  - b. Rate Base requirements such as gross fixed assets, consumer contributions and accumulated depreciation along with submission of the working capital requirement and a detailed scheme/ project-wise Capital Investment Plan with a capitalisation schedule covering each year of the Control Period;
  - c. A proposal for appropriate capital structure and its cost of financing (interest cost and return on equity);
  - d. Range of Transmission losses (upper and lower) for each year of the Control Period for the purpose of incentive / penalties;
  - e. Details of depreciation and capitalization schedule for each year of the Control Period;
  - f. Description of external parameters proposed for indexation;
  - g. Details of taxes on income;
  - h. Any other relevant expenditure;
  - i. Proposals for sharing of gains and losses;
  - j. Proposals for efficiency parameter targets;
  - k. Proposals for rewarding efficiency in performance; and
  - l. Any other matters considered appropriate.
- 6.3.5 The filing for proposed tariff for determination of tariff/charges for Transmission of electricity, i.e. Transmission Tariff/Charges to recover the ARR of Transmission Business, shall be made along with the ARR filing.
- 6.3.6 The application for filing for proposed tariff for transmission business shall contain the following:

- a. The Transmission system or network usage forecast for each year of the Control Period consistent with the Resource Plan;
- b. Proposals for computation of tariffs for Transmission of electricity for each of the years of the Control Period, including the losses to be charged in kind and the procedure thereof;
- c. Proposals for Non-Tariff Income with item-wise description and details;
- d. Proposals in respect of income from Other Business; and
- e. Expected Revenue from the proposed Transmission Charges, Non-Tariff Income and Income from Other Business (es).

6.3.7 **Distribution Business:** ARR for Distribution Business: - The ARR filings shall contain the following:

- a. The Operation and Maintenance (O&M) costs which include employee-related costs, repair & maintenance costs and administrative & general costs;
- b. Rate Base requirements such as gross fixed assets, consumer contributions and accumulated depreciation along with submission of the working capital requirement and a detailed scheme / project-wise Capital Investment Plan with a capitalisation schedule covering each year of the Control Period;
- c. A proposal for appropriate capital structure and its cost of financing (interest cost and return on equity).
- d. Targets proposed for reduction of distribution losses during the Control Period duly adhering to the “Standards of Performance of Distribution Licensee” Regulation;
- e. Details of depreciation and capitalisation schedules for each year of the Control Period;
- f. Description of external parameters proposed to be used for indexation;
- g. Details of taxes on income;
- h. Any other relevant expenditure;
- i. Proposals for sharing of gains and losses;
- j. Proposals for efficiency parameter targets;
- k. Proposals for rewarding efficiency in performance;
- l. Any other matters considered appropriate

6.3.8 . The filing for proposed tariff for Distribution business and Supply shall be filed along with the respective ARR filings. The application shall be made for determination of tariff for:  
Wheeling of electricity  
Retail sale of electricity,

6.3.9 The application for filing for proposed wheeling charges shall contain the following:

- a. The Distribution system or network usage forecast for each year of the Control Period;
- b. Proposals for computation of tariffs for wheeling of electricity for each of the years of the Control Period, including the losses to be charged in kind and the procedure thereof.
- c. Proposals for Non-Tariff Income with item-wise description and details.
- d. Proposals in respect of income from Other Business.



- e. The proposed wheeling charges shall be voltage-wise. For the first Control Period, however, the Distribution Licensee may propose these charges computed on normative basis.
- f. Expected Revenue from the proposed Wheeling Charges, Non-Tariff Income and Income from Other Business (es).

**6.3.10 Retail Sale of Electricity : ARR for Retail Supply Business:** - The ARR for Retail Sale of Electricity shall contain:

- a. Power purchase costs for each year of the Control Period. The power purchases costs shall also include the transfer price of own generation for the supply business in line with the Power Procurement Plan approved by the Commission as part of the Distribution Licensee's Resource Plan.
- b. All other items mentioned for the distribution business to the extent applicable.

**6.3.11** The application for filing for the proposed tariff of the Retail sale of Electricity shall contain the following:

- a. Proposal for retail sale of electricity to the consumers pertaining to its retail supply business and the details may include tariffs for each consumer category, slab-wise and voltage-wise. The tariffs proposed may also include energy charges, fixed/demand charges and minimum charges.
- b. Proposals for Non-Tariff Income with item-wise description and details.
- c. Each tariff proposal submitted by the Distribution Licensee shall be supported with a cost-of-service model allocating the costs of the licensed business in respect of each category of consumers based on appropriate assumptions.
- d. Expected Revenue from the proposed Retail Sale Tariffs, Non-Tariff Income and income from Other Business (es) and other matters considered appropriate by the Distribution Licensee, including incentive schemes to consumers, voltage surcharge and power factor surcharge.

**6.4** For all the above, the applicant shall provide full details supporting the forecast made in the filing for ARR and expected revenue from tariffs and charges, including but not limited to details of past performance, proposed initiatives for achieving efficiency or productivity gains, technical studies, contractual arrangements and/ or secondary recourse to enable the commission to assess the reasonableness of the forecast.

**7. Forecast**

**7.1** The applicant shall submit the forecast of ARR and expected revenue from tariff and charges for the each year of the control period shall be submitted not less than one hundred and twenty (120) days before the commencement of first financial year of the control period, as given in Regulation 6.1, above;

**7.2 Forecast of ARR**

**7.2.1** The applicant shall develop the forecast of ARR using any one of the following two methodologies:

- (a) Assumptions relating to the behavior of individual variables that comprise the ARR during the control period; or
- (b) Assumptions relating to-
  - i. Percentage annual change in a suitable macro-economic or market index, or combination thereof, to which the ARR of the applicant is correlated; and
  - ii. Percentage annual reduction in ARR due to efficiency or productivity gains proposed to be achieved by the applicant during the control period:

Provided that applications under this Regulation for the first control period shall be accompanied by forecasts developed using the methodology specified in clause (a) of Regulation 7.2.1, above.

7.2.2 For subsequent control periods, the applicant may seek to change the methodology for forecasting the ARR, either:

- (a) from the methodology specified in clause (a) of Regulation 7.2.1 to clause (b) of that Regulation; or
- (b) from the methodology specified in clause (b) of Regulation 7.2.1 to clause (a) of that Regulation,

Provided that the applicant shall apply to the Commission for approval of change of methodology along with the rationale thereof and such other details as the Commission may require, at least nine (9) months before the commencement of such control period.

Provided that (b) of Regulation 7.2.2 above will not be applicable at the beginning of the second control period.

7.2.3 The Commission shall upon scrutiny of such application and after conducting hearing as per the Conduct of Business Regulations of the JSERC, either

- (a) Approve the change the method, subject to such conditions as it may specified in the said Order, or
- (b) Reject the application for reasons to be recorded in writing.

7.3 Upon studying the application, the Commission shall either –

- (a) Pass an order approving the forecast ARR and expected revenue from tariff and charges for the control period, subject to such modifications and conditions as it may specify in the said Order; or
- (b) Reject the application for reasons to be recorded in writing, if it is not in accordance with the principles contained in Section 61 of the Act or this Regulations and direct the applicant to submit a revised forecast taking into consideration such factors as the Commission may deem appropriate.

7.4 The Commission shall, in its Order passed under Regulations 7.3 above, specify the variables comprised in the ARR and expected revenue from tariff and charges of the applicant shall be reviewed by the Commission as part of the annual performance review in accordance with Regulation 8 below.

## **8. Specific trajectory for certain variables**

8.1 The Commission may stipulate a trajectory, which may cover one or more control periods, for certain variables having regard to the reorganization, restructuring and development of the electricity industry in the State.

Provided that the variables for which a trajectory may be stipulated include, but are not limited to, generating station availability, gross station heat rate, transmission losses, distribution losses and collection efficiency.

8.2 Where the Commission has stipulated a trajectory for certain variables under this Regulation 8, the norms specified in the terms and conditions for determination of thermal generation tariff, distribution tariff regulations and other regulations that may be notified by

the Commission from time to time, as the case may be, shall not apply with regard to such variables for such period as the trajectory has been so stipulated.

- 8.3 The trajectory stipulated by the Commission in accordance with this Regulation 8 shall be incorporated by the applicant in his forecast of ARR and/or expected revenue from tariff and charges.

## 9. Annual review of performance

- 9.1 Where the ARR and expected revenue from tariff and charges of a Generating Company or Licensee is covered under a multi-year tariff framework, then such Generating Company or Licensee, as the case may be, shall be subject to an annual performance review during the control period in accordance with this Regulation.

- 9.2 The application for annual performance review during any financial year of the control period shall be made not less than one hundred and twenty (120) days before the close of such financial year.

Provided that the Generating Company or Licensee, as the case may be, submit to the Commission, information in such form as may be stipulated by the Commission from time to time, together with the Accounting Statements, extracts of books of account and such other details as the Commission may require to assess the reasons for and extent of any variation in financial performance from the approved forecast of ARR and expected revenue from tariff and charges;

- 9.3 The applicant shall submit the information required for the annual performance review in such manner as may be stipulated by the Commission from time to time.

- 9.4 The scope of the annual performance review shall be a comparison of the performance of the Generating Company or Licensee with the approved forecast of ARR and expected revenue from tariff and charges;

- 9.5 For the variables comprised in the ARR as stipulated by the Commission under Regulation 7.4, the Commission shall carry out a detailed review of performance of the applicant vis-à-vis the approved forecast.

- 9.6 Upon completion of the review under Regulation 9.5 above, the Commission shall attribute any variations or expected variations in performance for variables stipulated under Regulation 7.4 to factors within the control of the applicant (controllable factors) or to factors beyond the control of the applicant (uncontrollable factors):

Provided however that where the applicant or any interested or affected party believes, that there is a material variation or expected variation in performance, for any financial year, on account of some unforeseen uncontrollable factors, such applicant or interested or affected party may apply to the Commission for inclusion of such variable, at the Commission's discretion under para 9.8 of this Regulation.

*Notes: Uncontrollable factors include the following factors-*

- Force Majeure Events;
- changes in law, judicial pronouncements and Orders of the Central Government, State Government or Commission;
- economy-wide influences, such as unforeseen changes in inflation rate, market-interest rates, taxes and statutory levies.

- 9.6.1 Some illustrative variations or expected variations in the performance of the applicant which may be attributed by the Commission to uncontrollable factors include, but are not limited to, the following:

- a. Variation in the cost of power generation and/or power purchase;
- b. Variation in the number or mix of consumers or quantities of electricity supplied to consumers:

Provided that where there is more than one Distribution Licensee within the area of supply of the applicant, then any variation in the number or mix of consumers or in the quantities of electricity supplied to consumers within the area served by two or more such Distribution Licensees shall be attributable to controllable factors:

Provided further that where any consumer or category of consumers within the area of supply of the applicant is eligible for open access under sub-section (3) of Section 42 of the Act, then any variation in the number or mix of such consumers or quantities of electricity supplied to such eligible consumers shall be attributable to controllable factors;

Some illustrative variations or expected variations in the performance of the applicant which may be attributed by the Commission to controllable factors include, but are not limited to, the following:

- a. Variations in capital expenditure on account of time and/ or cost overruns / efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or Force Majeure events;
- b. Variations in technical and commercial losses, including bad debts subject to prudence check by the Commission;
- c. Variations in the operating costs of licensees which will include network costs (salaries and wages, repairs and maintenance, administrative and general costs) and financing costs (interest, return on equity, banking charges, etc);
- d. Failure to meet the standards specified in the Standards of Performance Regulations, except where exempted in accordance with those Regulations;
- e. Variations in any variable other than those stipulated by the Commission, except where reviewed by the Commission under this regulation.

9.7 The variations in the performance of a Generating Company or licensee on account of factors within the control of the applicant (controllable factors) as specified in regulation 9.6.2 shall be subject to detailed Multi Year Tariff principles outlined in Annexure I of these Regulations.<sup>[1]</sup>

9.8 Generating Company or Licensee or any interested or affected party may, as a result of additional information not previously known or available to him at the time the forecast under Regulation 7 was developed, apply for a modification in the approved forecast of ARR and expected revenue from tariff and charges for the remainder of the control period as part of the annual performance review.

Provided that the Generating Company or Licensee, may modify approved forecast under this Regulations 9.8 and 9.9 once in each control period.

9.9 The Commission may, as a result of additional information not previously known or available to the Commission at the time the forecast under Regulation 7 was developed, if it so deems appropriate, either suo motu or on an application made by any interested or affected party, modify the approved forecast of ARR and expected revenue from tariff and charges for the remainder of the control period as part of the annual performance review.

Provided that the Commission may modify the approved forecast under this Regulations 9.8 & 9.9 once in each control period.

- 9.10 The Commission shall review an application made to it under Regulation 9.8 and Regulation 9.9 above in the same manner as the original application for annual performance reviewed and upon completion of such review either approve the proposed modification with such changes as it deems appropriate or reject the application made for reasons to be recorded in writing.
- 9.11 The order issued by the Commission for the first filing for control period and for subsequent annual reviews shall take into account the following:
- (a) the approved aggregate gain or loss to the Generating Company or Licensee on account of uncontrollable factors and the mechanism by which the Generating Company or Licensee shall pass through such gains or losses in accordance with Regulation 10;
  - (b) the approved aggregate gain or loss to the Generating Company or Licensee on account of controllable factors and the amount of such gains or such losses that may be shared in accordance with Regulation 11;
  - (c) the approved modifications to the forecast of the Generating Company or Licensee, for the remainder of the control period, if any, under Regulation 9.10 above.
- 9.12 The Commission shall conduct a Public Hearing before the completion of the annual performance review and issued an order on the same.

**10. Mechanism for pass through of gains or losses on account of uncontrollable factors**

- 10.1 The approved aggregate gain or loss to the Generating Company or Licensee on account of uncontrollable factors shall be passed through as an adjustment in the tariff of the Generating Company or Licensee over such period as may be specified in the Order of the Commission passed under Regulation 9.11.
- 10.2 Nothing contained in this Regulation 10 shall apply in respect of any gain or loss arising out of variations in the price of fuel, which shall be dealt with as per the Fuel Surcharge Adjustment Mechanism in place or as approved by the Commission in the absence of the such mechanism.

**11. Mechanism for sharing of gains or losses on account of controllable factors**

- 11.1 The approved aggregate gain to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:
- (a) One-third of the amount of such gain shall be passed on as a rebate in tariffs over such period as may be specified in the Order of the Commission under Regulation 9.11;
  - (b) One-third of the amount of such gain shall be retained in a special reserve for the purpose of absorbing the impact of any future losses on account of controllable factors under clause (b) of Regulation 11.2; and
  - (c) The balance amount of gain may be utilized at the discretion of the Generating or Licensee Company.
- 11.2 The approved aggregate loss to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:
- (a) The amount of loss shall be entirely absorbed by the Generating Company or Licensee

## **12. Annual determination of tariff**

The Commission shall determine the tariff of a Generating Company Licensee covered under a multi-year tariff framework for each financial year during the control period, at the commencement of such financial year, having regard to the following :

- (a) The approved forecast of ARR and expected revenue from tariff and charges of such financial year, including approved modifications to such forecast; and
- (b) Approved gains and losses to be passed in tariff following the annual performance review.

## **13. End of Control Period Review**

13.1 The Commission may, based on the experience gained with implementation of multi-year tariffs in the State, extend or reduce the duration of subsequent control periods, as it may deem appropriate:

Provided also that the Commission shall not so extend or reduce the duration of subsequent control periods without a public hearing.

Provided also that the Commission shall not extend or curtail the duration of any control period during such control period.

## **14. Power to amend**

The Commission may, any time, vary, alter, modify or amend or any provisions of these Regulations.

## **15. Power to remove difficulties**

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

**By order of the Comission**

**A.K.Mehta**

**Secretary**

**Jharkhand State Electricity Regulatory Commission, Ranchi**

## **Annexure I: Detailed Principles for treatment of controllable factors**

### **1. Sales Forecast**

a. The licensees will forecast sales for each customer category (and sub-categories i.e., slabs) for all years of the control period in their filings, for the Commission's review and approval. The sales forecast would normally not require any annual revisions, and the Commission approved category-wise sales forecast will be applied for estimating the licensees' power procurement requirement for each year of the control period.

b. To these normal guidelines, certain exceptions are provided to meet exigencies such as abnormal weather conditions or changes in conditions of supply. For example, if supply in excess of that forecast is required for a particular consumer category, the licensees can make an application to the Commission in that year for approval. The application will demonstrate the need and show how the licensees would meet the costs, if any, towards such additional supply.

c. In its review of the licensees' Aggregate Revenue Requirement, the Commission will examine the sales forecasts filed for reasonableness, consistency across all licensees, etc., before granting approval. This review is important, as under prevailing conditions of cross-subsidy, a very conservative or aggressive forecast will provide a misleading basis for determination of bulk supply tariffs. The review will provide opportunity to the licensees to justify and support their forecasts.

d. The Commission will require the licensees to satisfy it that supply to consumers is made as per conditions specified in the license, the standards and codes issued by the Commission, and the quantum and/or time of supply provided in the Tariff Orders. In particular, any significant supply restrictions, such as extended outage or failure of transmission will be adjusted against revenue requirement.

e. Towards this end, the licensees are required to propose a methodology to monitor supply to subsidised consumer classes.

### **2. Aggregate Technical & Commercial Losses**

a. The Commission will establish a AT&C loss target for the licensees for each year of the control period taking into account their filings, submissions and views expressed in the public hearing, and based on the results of its review. A separate set of AT&C loss targets will be specified for each licensee based on the area of supply, composition of consumer and sales mix and on the vintage of the system.

b. The approved AT&C loss target will be used for determination of licensees' revenue requirement for that year. The licensees are permitted to retain any financial gains arising from achieving higher AT&C loss reduction than the target as specified in Regulation 11.1. On the same basis, any financial loss arising from the inability to achieve the AT&C loss reduction target will not be permitted as a cost to the consumers, as per Regulation 11.2.

c. In their submissions, based on the targets set by the Commission, the licensees are required to propose a path for AT&C loss reduction for each year of the control period. The licensees will provide detailed plan for the proposed AT&C loss reduction target, by giving details of planned initiatives in metering, billing systems, capital investments, etc., and taking into account the state of the network, local conditions, past performance, etc.

d. As supplies to agriculture are at present un-metered, it is necessary to estimate the quantum of supply before the extent of AT&C losses can be determined.

e. The Commission may undertake a mid-term review i.e., during the control period, to assess the correctness of initial AT&C loss assumptions, and to make appropriate adjustments if there is a significant divergence found as a result of the study. Such a review may be undertaken if sought by the licensees, and supported by a rigorous assessment with facts gathered from field studies conducted on the basis of a methodology approved by the Commission, and at the licensees own cost.

### **3. Network Cost**

a. Network costs comprise salaries and wages, repairs and maintenance, administrative and general costs, and other miscellaneous expenses. Under the MYT Principles, a detailed review for network costs would need to be undertaken by the Commission at the beginning of the control period. For the intermediate years, network costs permissible towards revenue requirement will be indexed to say, inflation or adjusted inflation number.

b. In their submissions, licensees will propose network costs required for the base year in complete detail and with appropriate justification, as is the present practice, for the approval of the Commission. This would be needed for the licensees to meet the service qualities.

c. For the intermediate years of the control period, network costs to be considered for revenue requirement will be determined by adjusting the approved base value for inflation, using a predetermined index. The licensees will retain any financial gain achieved by keeping costs below this target as per Regulation 11.1. Similarly, the licensees will normally bear any financial loss arising from overrun in network costs as per Regulation 11.2.

d. To support their system improvement initiatives, or to rectify any specific shortcomings, etc., the licensees can propose for inclusion of an additional amount, for any one or more years of the control period. This proposal will be supported by a detailed justification of the specific requirement.

e. The Commission will finalise, in consultation with the licensees, a mechanism to assess the condition of assets on a regular basis, to safeguard against any deliberate under-spending in maintenance and upkeep of the network. To facilitate this, the licensees must finalise preparation of asset register.

### **4. Capital Investments**

a. Capital investments cover spending on capital equipment that augments fixed assets, and capitalization of corresponding interest and expenses determined as per the applicable accounting policies and guidelines. Capital investments may address a variety of needs such as meeting load growth, refurbishment and replacement of equipment, reduction of losses, improvement of voltage profile, improvement of quality of supply and system reliability, metering, communication, computerization, etc.

b. The licensees will propose in their filings a detailed capital investment plan for each year covering the control period. The plan must separately show ongoing projects that will spill into the years of control period, and new projects that will commence but may conclude within or beyond the control period. For the new projects, the filings must provide the justification as prescribed under relevant investment guidelines.

c. The Commission will review the licensees' investment plan for approval, and for this purpose may require the licensees to provide relevant technical and commercial details. The costs incurred on the used and useful asset corresponding to the approved investment plan of a licensee for a given year will, normally, be considered for its revenue requirement. The licensees can achieve the stated capital investment objectives at a lesser cost than approved by means of better project management.

d. In addition to the approved capital investment plan covering the entire control period, licensees can seek provision for additional capital expenditure anytime during the control period to meet regular or emergency requirements. The Commission will review these in the same manner and approve for inclusion in revenue requirement, wherever relevant.

e. In presenting the justification for new projects, the licensees will detail the specific nature of the works, a cost-benefit analysis and outcomes sought to be achieved and date of completion and commercial operation. The detail must be shown in the form of physical parameters, e.g., new capacity added, meters replaced, customer service centers set up etc., so that it is amenable for physical verification. This is necessary to ensure that the approved investments are, by and large, implemented and



the licensees do not derive improper financial benefit by delaying or neglecting to make the proposed investment. In case of any significant shortfall in physical implementation, the Commission may require the licensees to explain the reasons, and may proportionately reduce the provision, including the interest and the return component, made towards revenue requirement.

## 5. Financing Cost

a. As stated in Regulation 6.3, the costs corresponding to the approved investment plan of a licensee for a given year will, normally, be considered for its revenue requirement. For the past investments, actual values will be considered. While raising new finance, proportion of debt shall be considered as per the norms specified in the JSERC terms and conditions of determination of thermal generation tariff regulations, 2004 and the JSERC terms and conditions for distribution tariff regulation, 2004.

b. In its submission, the licensee must demonstrate that financing and investment requirements are matched. Thus, financing cost considered for revenue requirement is matched with what is needed for the approved level of capital expenditure and working capital and vice versa.

c. For past investments, viz. loans outstanding at the beginning of the control period, the licensees will indicate in their filings the expected interest outgo for each year. This will be considered towards revenue requirement of the licensees for such years.

d. Depreciation charge for purpose of revenue requirement will be initially as forecast (based on the depreciation rates as given in the Depreciation Schedule in Annexure II of these Regulations) but later corrected to that provided in audited accounts.

## 6. Working Capital

a. A target will be set by the Commission for the collection of receivables and that provision may be made to write off bad debts. The definition of bad debts would need to be discussed to prevent immediate shocks to the financials of existing licensees. No interest on working capital should be permitted for working capital increasing over the normative benchmarks. The normative benchmarks shall be worked out and specified by the Commission prior to issuing the first tariff order for a Generating Company or Licensee, during the first control period.

## 7. Quality of Supply and Customer Service

a. The regulations on “Standards of performance of Distribution Licensee “ and “Supply Code” as notified by the Commission would detail the quality and service aspects of supply and various obligations and penalties thereon in the event of lack of fulfillment of the same.

### ANNEXURE II : Depreciation Schedule

Asset description	Rate of depreciation (straight line) - in %
A. Land owned under full title	-
B. Land held under lease	
a) for investment in the land	-
b) for cost of clearing site	-
C. Assets Purchased New:	
a. Building & civil engineering works of permanent character	
i) Offices & showrooms	3.02
ii) Temporary erection such as wooden	33.40

structures	
iii) Roads other than kutcha roads	3.02
iv) Others	3.02
b. Transformers, transformer (Kiosk) sub-station equipment & other fixed apparatus (including plant foundations)	
i) Transformers (including foundations) having a rating of 100 kilo volt amperes and over	7.81
ii) Others	7.84
C. Switchgear including cable connections	7.84
D. Lightning arrestors:	
(i) Station Type	7.84
(ii) Pole Type	12.77
(iii) Synchronous condensor	5.27
E. Batteries	33.40
F. (i) Underground cable including joint boxes and disconnected boxes.	5.27
(ii) Cable duct system	3.02
G. Overhead lines including supports:	
(i) Lines on fabricated steel operating at nominal voltages higher than 66 KV.	5.27
(ii) Lines on steel supports operating at nominal voltages higher than 13.2 kilo volts but not exceeding 66 kilo volts.	7.84
(iii) Lines on steel or reinforced concrete supports.	7.84
(iv) Lines on treated wood supports.	7.84
H. Meters	12.77
I. Self Propelled Vehicles	33.40
J. Air conditioning plants:	
(i) Static	12.77
(ii) Portable	33.40
K.(i) Office furniture and fittings	12.77
(ii) Office equipments	12.77
(iii) Internal wiring includind fittings and apparatus	12.77
iv) Street light fittings	12.77
L. Apparatus let on hire	
i) Other than motors	33.40
ii) Motors	12.77
M. Communication equipment:	
i) Radio and high frequency carrier system	12.77
ii) Telephone lines and telephones	12.77

N. Assets purchased second hand and assets not otherwise provided for in the Schedule	Such reasonable period as the JSERC determines in each case having regard to the nature, age and condition of the assets at the time of its acquisition by the owner

**For depreciation schedule of thermal generating units JSERC (Terms and Conditions for Determination of Thermal Generation Tariff) Regulations, 2004 may be referred to.**