

Bhopal, Dated: 5th December 2005

No. 2932/MPERC/2005. In exercise of powers conferred by Section 61 read with Section 181(zd) of the Electricity Act 2003 (No. 36 of 2003), the Madhya Pradesh Electricity Regulatory Commission hereby makes the following regulations:

**MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION
(TERMS AND CONDITIONS FOR DETERMINATION OF GENERATION
TARIFF) REGULATIONS, 2005 (G-26 OF 2005)**

CHAPTER I - PRELIMINARY

1. Short title and commencement

- 1.1 These Regulations shall be called 'The Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2005' (G-26 of 2005).
- 1.2 These Regulations shall extend to the whole of the state of Madhya Pradesh.
- 1.3 These Regulations shall come into force from the date of their publication in the official gazette of the Government of Madhya Pradesh.

2. Scope and extent of application

- 1.4 These Regulations shall apply in all cases of determination of generation tariff under section 62 of the Electricity Act 2003 for supply of electricity to a distribution licensee by existing state sector generating stations where the capacity is allocated by State Government under section 132 of Electricity Act 2003, but shall not apply where tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government as per the provisions of section 63 of the Electricity Act 2003.
- 1.5 Any new generating company or station which comes up in future and proposes to supply electricity to a distribution licensee of the State shall be subjected to the norms prescribed by CERC vide its order dated 26/03/2004 unless it proposes to supply electricity through bidding in accordance with the guidelines issued by the Central Government as per provisions of section 63 of the Electricity Act 2003.

3. Norms of Operation to be threshold norms

- 1.6 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 are agreed to shall be applicable for determination of tariff.

4. Definitions

- 1.7 In these regulations, unless the context otherwise requires,
 - (a) "Act" shall mean the Electricity Act, 2003 (36 of 2003);
 - (b) "Accounting Statement" means for each financial year the following statements, namely-
 - (i) balance sheet, prepared in accordance with the form contained in Part I of Schedule VI to the Companies Act, 1956;
 - (ii) profit and loss account, complying with the requirements contained in Part II of Schedule VI to the Companies Act, 1956

- (iii) cash flow statement, prepared in accordance with the Accounting Standard on Cash Flow Statement (AS-3) of the Institute of Chartered Accountants of India;
 - (iv) report of the statutory auditors' of the generating company;
 - (v) cost records if any, prescribed by the Central Government under Section 209(1)(d) of the Companies Act, 1956,
 - (vi) together with notes thereto, and such other supporting statements and information as the Commission may direct from time to time;
- (c) "Applicant" means a generating company who has made an application for determination of tariff for supply of electricity to a beneficiary in accordance with 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 beneficiary;
- (d) "Bank rate" shall mean the bank rate of Reserve Bank of India as on April 1, of the relevant year;
- (e) "Base Year" shall mean the first year of the Tariff Period;
- (f) "Beneficiary" shall mean the person buying power from a generating station on payment of annual fixed charges and include MPSEB who had been made as a deemed trading licensee by the State Govt. of Madhya Pradesh;
- (g) "Block" in relation to a combined cycle thermal generating station includes combustion turbine – generators, associated waste heat recovery boilers, connected steam turbine – generator and auxiliaries;
- (h) "Commission" shall mean the Madhya Pradesh Electricity Regulatory Commission;
- (i) "Date of Commercial operation" (COD)
- (i) in case of a generating company, shall mean the date declared by the generator
 - a. in relation to a unit, after demonstrating the Maximum Continuous Rating (MCR) or Installed Capacity (IC) through a successful trial run after notice to the beneficiaries and
 - b. in relation to a generating station the date of commercial operation of the last unit or block of the generating station;
- (j) "Deemed Generation" means the energy, which a generating station was capable of generating but could not generate due to the conditions of grid or power system, beyond the control of generating station;
- (k) "Generation Tariff" shall mean tariff for ex- bus supply of electricity from a generating station;
- (l) "Licensee" shall include a person deemed to be a licensee under Section 14 of the Act;
- (m) "Officer" means an officer of the Commission;
- (n) "Secretary" means Secretary to the Commission;
- (o) "Tariff" shall mean the schedule of charges for generation and bulk supply of electricity together with terms and conditions for application thereof;
- (p) "Tariff period" shall mean the period for which tariff principles as determined by the Commission under these regulations are applicable;

- (q) “Time Block” shall mean a block of 15 minutes starting from 00.00 hrs;
- (r) “Unscheduled interchange” (UI) shall mean unscheduled interchanges as defined in Indian Electricity Grid Code;
- (s) “Year” shall mean financial year ending on 31st March, and
 - (i) “Current Year” shall mean the year in which the statement of annual accounts or petition for determination of tariff is filed,
 - (ii) “Previous Year” shall mean the year immediately preceding the current year,
 - (iii) “Ensuing Year” shall mean the year next following the current year.

1.8 Words or expressions occurring in these regulations and not defined shall bear the same meaning as in the Act.

5. Determination of Tariff

- 1.9 The Commission shall determine tariff including terms and conditions thereof in the case of supply of electricity by a generating company to a beneficiary.
- 1.10 Notwithstanding anything specified in these Regulations, the Commission shall adopt the tariff if such tariff has been determined through a transparent process of bidding in accordance with the guidelines issued by the Central Government.

6. Principles for tariff determination

- 1.11 The Commission, while specifying the terms and conditions for the determination of tariff under these Regulations, shall be guided by the principles contained in section 61 of the Act.
- 1.12 The regulation encourages Generating Company to operate on sound commercial principles. Only prudent levels of receivables and payables as per industry norms and accounting policies specified in this regard shall be considered for computing working capital requirement and allowable expenses. The return on equity earned by Generating Company shall depend upon performance relative to the benchmark levels of the operating and costs parameters fixed by the Commission. Only prudent capital expenditure shall be considered for inclusion in the Asset base. The Generating Company shall be encouraged to implement MIS and HR policies (providing incentives to employees for increased productivity) by including the cost incurred in the allowable tariff. The Commission will consider offsetting the adverse financial impact of the directions given by the State Government under section 11(1) of the Electricity Act 2003.
- 1.13 The MYT principles prescribed in this regulation seek to promote competition, adoption of commercial principles, efficient working of the Generating Company and are based on the CERC principles. The operating and cost parameters for the tariff period have been prescribed after duly considering the past performance, performance of similarly placed units and benchmark parameters fixed by other Commissions. These operating and cost parameters over the tariff period move closer to efficient levels and the allowable tariffs are determined in accordance with these norms. The Generating Company is allowed to retain a portion of savings as a reward for performance better than those prescribed in these regulations. This is expected to incentivise the Generating Company for efficient performance and economical use of resources. The distribution licensee shall also benefit from the sharing of profits resulting from efficient performance and economical use of resources by the Generating Company through lowering of tariffs and improvement in availability and Plant Load Factor of generating stations. However the losses consequent to failure by the Generating Company in not achieving the prescribed norms shall not be allowed to be passed on to the beneficiary.

- 1.14 Only those investments and capital expenditure that are in accordance with the guidelines framed by the Commission in this regard shall be allowed to be recouped through tariffs. This shall ensure prudent investments by the Generating Company.
- 1.15 The terms and conditions prescribed in these regulations are for conventional energy sources. As required in section 86 (i) of the Act, the Commission vide its order dated 11th June 2004 has fixed the quantum and price of power to be purchased by distribution licensees from wind energy generators for the period FY05 to FY07. The Commission will, in due course, pass necessary orders in respect of other renewable sources of energy.

7. Procedure for making applications for determination of tariffs

- 1.16 An application for determination of tariff shall be made in accordance with the manner specified in these Regulations, and accompanied by such fees as may be specified.
- 1.17 The Commission shall, at all times, have the authority, either suo motu or on a petition filed by any interested or affected party, to determine the tariff, including terms and conditions thereof, of generating company and shall initiate the process of such determination in accordance with the procedure as may be specified.

Provided that the proceedings for such determination of tariff, including terms and conditions thereof, shall be in the same manner as set out in the Conduct of Business Regulations:

- 1.18 The applicant shall provide, as part of the application to the Commission, in such formats as may be required by the Commission, full details of its calculations of the expected revenue from tariff and charges which it is permitted to recover and thereafter it shall furnish such further information as the Commission may reasonably require to assess such calculation [Refer MPERC (Procedure for calculating expected revenue from tariff and charges) Regulation 2005]. The applicant / Generating Company shall necessarily provide details station wise as envisaged in the formats to enable the Commission to determine the tariff station wise. The Generating Company shall put all the details of the petition filed before the Commission on its website not later than 3 days of its acceptance by the Commission.
- 1.19 The Commission or the Secretary or any Officer designated for the purpose by the Commission may, upon scrutiny of the application, require the applicant to furnish such additional information or particulars or documents as may be considered necessary for the purpose of processing the application.
- 1.20 Upon receipt of the complete application accompanied by all requisite information, particulars and documents in compliance with all the requirements, the application shall be deemed to be received and the Commission or the Secretary or the Officer designated for the purpose by the Commission shall intimate to the applicant that the application is ready for publication, in such abridged form and manner, as may be specified [Refer MPERC (Details to be furnished and fees payable by licensee or generating company for determination of tariff and manner of making an application) Regulation 2004].
- 1.21 The applicant shall furnish to the Commission all such books and records (or certified true copies thereof), including the Accounting Statements, operational and cost data, as may be required by the Commission for determination of tariff.
- 1.22 The Commission may, if deems necessary, make available to any person, at any time, such information as has been provided by the applicant to the Commission including abstracts of such books and records (or certified true copies thereof)

Provided that the Commission may, by order, direct that any information, documents and papers/materials maintained by the Commission, shall be confidential or privileged and shall not be available for inspection or supply of certified copies, and the Commission may also direct that such document, papers or materials shall not be used in any manner except as specifically authorised by the Commission.

8. Methodology for Determination of Tariff applicable to generating company

- 1.23 The Commission shall define tariff periods for the generating company from time to time. The principles for tariff determination shall be applicable for the duration of the tariff period. To start with, the principles that guide tariff determination shall be valid for a period of three years commencing from 1st April 2006 to synchronise with the CERC tariff period. However, the provisions of these regulations shall come into effect immediately on notification to enable the applicant to prepare the application for the FY 2006-07 in accordance with these principles.
- 1.24 Tariff in respect of a generating company under these regulations shall be determined station wise. The Generating Company shall submit separate calculations in respect of each generating station.
- 1.25 For the purpose of tariff, the capital cost of the project shall be segregated into stages and by distinct units forming part of the project. Where the stage-wise, unit-wise, break up of the capital cost of the project is not available and in case of on-going projects, the common facilities shall be apportioned on the basis of the capacity of the units. In relation to multi-purpose hydroelectric projects, with irrigation, flood control and power components, the capital cost chargeable to power component of the project only shall be considered for determination of tariff.

Explanation: “Project” includes a generation station.

- 1.26 A generating company shall file a petition at the beginning of the tariff period and every year thereafter. A review shall be undertaken by the Commission to scrutinise and true up the data and to accommodate any uncontrollable variations. This filing shall be in accordance with and in the formats specified in MPERC (Details to be furnished and fees payable by licensee or generating company for determination of tariff and manner of making an application) Regulations, 2004 by 15th October every year
- 1.27 A distribution licensee owning and operating a generating station shall maintain and submit separate accounts of generation, its licensed business, and other business.

9. Submission of Annual Accounts, Reports etc

- 1.28 The Generation Company shall submit annual accounts and such other information in a form as may be specified by the Commission.
- 1.29 In the absence of information, the Commission may initiate Suo-Motu proceedings.

10. Periodicity of tariff determination

- 1.30 No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified.
- 1.31 The Commission may, after satisfying itself for reasons to be recorded in writing, may allow for the revision of tariff.

- 1.32 Subject to other provisions of these regulations, the expenses allowed to be recouped for any financial year, shall be subject to adjustments in any tariff to be fixed for the subsequent period, if the Commission is satisfied, that such adjustments for the excess amount or shortfall in the amount actually realized or expenses incurred is necessary and the same is not on account of any reason attributable and within the control of the generating company.

11. Hearings

- 1.33 The procedure of hearing on the tariff application shall be as specified in MPERC (Details to be furnished and fees payable by generating company for determination of tariff and manner of making an application) Regulations 2004.

12. Orders of the Commission

- 1.34 The Commission, after the petition has been filed, may require the generating company to furnish any further information, particulars, documents, public records etc as the Commission may consider appropriate to enable the Commission to assess the petitioner's calculations, assumptions and assertions.
- 1.35 After receipt of information or otherwise, the Commission may make appropriate orders in accordance with the provisions of the Madhya Pradesh Electricity Regulatory Commission (Details to be furnished and fees payable by generating company for determination of tariff and manner of making an application) Regulations, 2004.

13. Fuel Cost Adjustment (VCA)

- 1.36 The Commission, in its Order dated 30th November, 2002 has specified a formula for recovering an additional charge for adjustment of tariff on account of fuel related costs of electricity generation, change in the rate of levy of water charges, change in tax structure, and any other unpredictable and unforeseen cost not envisaged at the time of tariff fixation. The approved formula is subject to review from time to time as the Commission may deem fit.
- 1.37 The generating company may compute such VCA charges (in accordance with the specified formula) and recover the same from the beneficiary.

14. Refund of excess amount

- 1.38 Any generating company found to be charging a tariff more than the one approved by the Commission from the beneficiary shall be deemed to have not complied with the directions of the Commission and shall be liable to punishments under section 146 of the Act without prejudice to any other liability incurred by generating company under any other provisions of the Act.
- 1.39 If any generating company recovers the charges exceeding the tariff determined by the Commission, the excess amount shall be refunded to the beneficiary, which has paid such excess charges, along with interest for that period equivalent to the bank rate.

15. Annual review of the generating company

- 1.40 The applicant shall submit periodic returns as may be specified, containing operational and cost data to enable the Commission to monitor the implementation of its order.
- 1.41 The applicant shall submit to the Commission annual statements of its performance and accounts including latest report of audited accounts and the tariff worked out in accordance with these regulations.

- 1.42 The Commission shall scrutinize the annual accounts, norms achieved and tariff worked out by the applicant. The tariff worked out by the generating company shall be subject to the Commission's order under this regulation.
- 1.43 In case an applicant is unable to reach the norms of target PLF/availability fixed under these regulations in any year, any excess amount recovered in any year shall be refunded or adjusted in the bills relating to the quarter following the determination of the actual performance.

CHAPTER II

(A) PRINCIPLES & METHODOLOGY FOR DETERMINATION OF TARIFF

16. Petition for determination of tariff

- 2.1 The Generating Company shall file a petition for determination of tariff for supply of electricity to a beneficiary complying with provision of Chapter I of these regulations and MPERC (Details to be furnished and fee payable by licensee or generating company for determination of tariff and manner of making application) Regulations 2004.
- 2.2 The Generating Company shall file petition for determination of tariff based on the long-term principles prescribed by the Commission in these regulations. These principles shall be implemented from April 01, 2006 and shall be applicable for three years to synchronize with the CERC's tariff period.
- 2.3 Any difference in provisional tariff and the final tariff determined by the Commission and not attributable to the Generating Company may be adjusted in the tariff for the following year as directed by the Commission.

17. CERC's Principles

- 2.4 The Commission while framing these regulations has been guided by the principles and methodologies specified by the Central Commission (CERC) in its order effective from 1.04.2004. This chapter describes the principles and terms and conditions that would be applicable to the generating company.

18. Capital Cost

- 2.5 Subject to prudence check by the commission, the actual expenditure incurred on completion of the project shall form the basis for determination of tariff. The tariff shall be determined based on the admitted capital expenditure actually incurred upto the date of commercial operation of the Generating units/station and shall include capitalized initial spares subject to ceiling norms as stipulated hereunder.
 - i) upto 2.5% of original capital cost in case of coal based generating stations,
 - ii) upto 4.0% of original capital cost in case of gas turbine/ combined cycle generating stations, and
 - iii) upto 1.5% of original capital cost in case of hydro-generating stations
- 2.6 Scrutiny of the cost estimates by the Commission shall be with regard to the reasonableness of the capital cost, financing plan, interest during construction, use of efficient technology, and such other matters for determination of tariff and the Commission may obtain expert advice as deemed necessary.
- 2.7 Where power purchase agreement provides for a ceiling of capital cost, the capital cost to be considered shall not exceed such ceiling.

- 2.8 Restructuring of capital cost in terms of relative share of equity and loan shall be permitted during the tariff period provided it does not affect tariff adversely. Any benefit from such restructuring shall be passed on to persons sharing the capacity charge in a ratio as may be specified by the Commission.

19. Additional capitalization

- 2.9 The following capital expenditure, actually incurred after the date of commercial operation and duly audited, may be considered by the Commission, subject to prudence check
- (a) due to deferred liabilities within the original scope of work,
 - (b) on works within the original scope of work, deferred for execution
 - (c) to meet award of arbitration or satisfaction of order or decree of a court arising out of original scope of works,
 - (d) on account of change in law,
 - (e) on procurement of initial spares included in the original project costs subject to the ceiling norm laid down in regulation 18.
 - (f) any additional works/ services, which have become necessary for efficient and successful operation of a generating station or a transmission or a distribution system but not included in the original capital cost.

Provided that original scope of work along with estimates of expenditure shall be submitted along with the application for provisional tariff.

Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the generating station.

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 regulation 20.

Note 2

Any expenditure on replacement of old assets shall be considered after writing off the gross value of the original assets from the original cost. Before allowing the loss due to sale of the retired assets a detailed examination regarding the justification for each and every asset item retired prior to the completion of useful life shall be carried out.

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 regulation 20.

Note 4

Any expenditure admitted by the Commission for determination of tariff on renovation, modernization, life extension and restoration of assets damaged due to natural calamities shall be serviced on normative debt-equity ratio specified in regulation 20 after writing off the original amount of the replaced assets from the original cost.

20. Debt-equity ratio

- 2.10 For the purpose of determination of tariff, debt-equity ratio as on the date of commercial operation in case of new generating station or capacity expansion shall be 70:30. The debt-equity amount arrived in accordance with this shall be used for calculation of interest on loan, return on equity, advance against depreciation and foreign exchange rate variation.
- 2.11 Where equity employed is in excess of 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan. The interest rate applicable on the equity in excess of 30% treated as loan has been specified in regulation 22. Where actual equity employed is less than 30%, the actual equity shall be considered.

21. Return on Equity

- 2.12 Return on equity shall be computed on the paid up equity capital determined in accordance with regulation 20 and shall be computed at 14% (post tax) per annum unless the Commission allows a lower level for reasons to be recorded.
- Provided that return on equity invested in work in progress shall be allowed from the date of commercial operation.
- 2.13 The premium raised by the generating company while issuing share capital and investment of internal resources created out of free reserves, if any, shall also be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting capital expenditure and forms part of the approved financial package. For the purposes of computation of return, the portion of free reserves utilized for meeting the capital expenditure shall be considered from the date the asset created is productively deployed in the generating business. .
- 2.14 Equity invested in foreign currency shall be allowed a return up to the prescribed limit in the same currency and the computation on this account for the ensuing year shall be made in Indian Rupees based on the exchange rate prevailing on first day of March of the current year.

22. Interest and finance charges on loan capital

- 2.15 Interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the schedule of repayment, as per the terms and conditions of relevant agreements of loan, bond or debenture, ordinarily restricted to prevailing rates of PFC / REC Term Lending Rate or the rates specified by the CERC from time to time. Exception can be made for the existing or past loans which may have different terms as per the agreements already executed if the Commission is satisfied that the loan has been contracted for and applied to identifiable generation projects. The interest rate on the amount of equity in excess of 30% treated as loan shall be the weighted average rate of the loan schemes of the generating company.

Provided that all loans considered for this purpose shall be identified with the assets created.

Provided that interest and finance charges of renegotiated loan agreements shall not be considered should they result in higher charges.

Provided that interest and finance charges on works in progress shall be excluded and considered as part of the capital cost.

- 2.16 Interest charges on security deposits, if any, with a generating company shall be considered at the rate specified by the Commission from time to time.
- 2.17 In case any moratorium period is availed of, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.
- 2.18 The generating company shall make every effort to swap the loan as long as it results in net benefit to the beneficiary. The cost associated with such swapping shall be borne by the beneficiary and any benefit on account of swapping of loan and interest on loan shall be passed on to the beneficiary in such ratio as may be decided by the Commission.

23. Depreciation

- 2.19 For the purpose of tariff, depreciation shall be computed in the following manner:
- (a) The value base for the purpose of depreciation shall be the historical cost of the assets, i.e. actual expenses limited to approved /accepted capital cost:
Provided that the consumer contribution or capital subsidy/ grant etc shall be treated as per the accounting rules notified and in force from time to time.
- (b) The approved/accepted cost shall include foreign currency funding converted to equivalent rupee at the exchange rate prevalent on the date of foreign currency actually availed.
- (c) Depreciation rates for the purpose of determination of allowable depreciation shall be as per CERC notification. The existing rates are given in Annexure-I of this regulation.
Provided that the total depreciation during the life of the asset shall not exceed 90% of the original cost.
- 2.20 Advance against depreciation (AAD) shall be permitted for any new projects in addition to allowable depreciation, in the manner given hereunder:
$$\text{AAD} = \text{Loan repayment amount as per regulation 22 subject to a ceiling of } 1/10^{\text{th}} \text{ of loan amount as per regulation 20 minus depreciation as per schedule}$$

Provided that Advance Against Depreciation for any new project shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year,

Provided further that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.
- 2.21 On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.
- 2.22 Depreciation shall be chargeable from the first year of operation. In case of operation of the asset for part of the year, depreciation shall be charged on pro-rata basis.

- 2.23 Depreciation against assets relating to environmental protection shall be allowed on case to case basis at the time of fixation of tariff.

24. Lease/ Hire Purchase charges

- 2.24 Lease charges for assets taken on lease by a generating company shall be considered as per lease agreement provided they are considered reasonable by the Commission.

25. Operation & Maintenance expenses

- 2.25 'Operation and Maintenance or O&M expenses' shall mean expenditure on manpower, repairs, spares, consumables, office administration and general.
- 2.26 Operation and maintenance expenses shall be determined for the tariff period based on normative O&M expenses specified by the Commission in these regulations. Thus the Commission is moving towards the performance based norms as against the cost plus model based on past years actual.
- 2.27 Normative O&M expenses allowed at the commencement of the tariff period shall be escalated at the prevailing rates of inflation for the year as notified by the Central Government and shall be considered as a weighted average of Wholesale Price Index and Consumer Price Index in the ratio of 60: 40 respectively. For the first tariff period inflation had been allowed at 6%
- 2.28 Increase in O&M charges on account of war, insurgency, or changes in laws, or like eventualities where the Commission is of the opinion that an increase in O&M charges is justified, may be considered by the Commission for a specified period.
- 2.29 Any saving achieved by generating company in any year shall be allowed to be retained by it. The generating company shall bear the loss if it exceeds the targeted O&M expenses for that year.

26. Interest charges on working capital

- 2.30 Rate of interest on working capital to be computed as provided subsequently in these regulations shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on April 1 of the relevant year plus 1%. 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 or has exceeded the working capital loan based on the normative figures.

27. Foreign Exchange Rate Variation (FERV)

- 2.31 In respect of foreign currency loans, not passed on or swapped as rupee loan, extra rupee liability towards interest payment and loan repayment actually incurred, in the relevant year shall be admissible; provided it directly arises out of foreign exchange rate variation and is not attributable to any lapse of the licensee or the generating company or its suppliers or contractors. This variation shall not exceed that as per exchange rate on 7th day after the due date of payment.

28. Tax on income

- 2.32 Income Tax, if any, on the income stream of the generation of electricity of a generating company shall be treated as an expense and shall be recoverable from the beneficiaries. However, the tax on any income stream, other than the generation of electricity shall not constitute a pass through component in the tariff. Tax on such other income shall be payable by the generating company.
- 2.33 Tax on income if actually liable to be paid, shall be limited to tax on return on equity allowed, excluding incentives.

- 2.34 The benefits of tax holiday and the credit for carrying forward losses applicable as per the provisions of the Income Tax Act, 1961 shall be passed on to the customers.
- 2.35 Where a generating company or a generating unit is exclusively for a beneficiary or beneficiaries, income tax liability of the generating company or generating unit, as the case may be, shall be assigned exclusive by or to the beneficiaries in the ratio of the allocation of generation capacity to the beneficiaries.

29. Provisional assessment of income tax and FERV

- 2.36 Income tax and FERV shall be provisionally estimated by the Commission for the purpose of determining tariff for a generating company and shall be subject to adjustment as per actuals as provided in regulations 27 and 28.

30. Pension and Gratuity Liability

- 2.37 The amount of unfunded liability of pension and gratuity based on actuarial valuation on the effective date of transfer scheme in respect of employees of MPSEB/ successor entities and the manner of discharging this liability shall be specified by the Commission after consultation with the State Government and the Transmission Licensee. The State Government has amended the transfer scheme notified on 31st May 2005 vide notification issued on 13th June 2005. The State Government has now provided for a creation of separate fund for discharging pension and terminal liabilities of the employees.
- 2.38 The Commission shall allow the actual expenditure incurred on payment of terminal benefits including pension payments of the employees on estimated basis for the ensuing year and shall be provided separately apart from O&M charges. The Generating Company shall provide evidence of having discharged the liability every quarter. Any difference between the allowance and the actual shall be adjusted in the subsequent year. The Generating Company shall disclose the accrued liability towards terminal benefits in the accounts as per the provisions of the Companies Act.

31. Tariff income

- 2.39 Income from all charges determined by the Commission for generation shall be considered as tariff income. Tariff income shall include Capacity charges, Energy charge and Other charges;

32. Late payment surcharge

- 2.40 In case the payment of bills is delayed beyond a period of 60 days from the date of billing, a generating company may levy a late payment surcharge at the rate of 1.25% per month on daily basis.

33. Rebate

- 2.41 For payment of bills of capacity charges and energy charges through a letter of credit on presentation, a rebate of 2% shall be allowed. If the payment is made by any other mode but within a period of one month of presentation of bills by the generating company, a rebate of 1% shall be allowed.

CHAPTER III

A: THERMAL POWER GENERATING STATIONS

34. Definitions

- 3.1 Unless the context otherwise requires, for the purpose of this part:

- (1) “Auxiliary Energy Consumption” (AUX) in relation to a period means the quantum of energy consumed by auxiliary equipment of the generating station and transformer losses within 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,
- (2) “Availability” in relation to a thermal generating station for any period means the average of the daily average declared capacities (DCs) 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, and shall be computed in accordance with the following formula:

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

where,

IC = Installed Capacity of the generating station in MW,

DC_i = Average declared capacity for the ith day of the period in MW,

N = Number of days during the period, and

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

- (3) “Declared Capacity” (DC) shall mean 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;

Note

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.

- (4) “Gross Calorific Value” (GCV) in relation to a thermal power 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;
- (5) “Gross Station Heat Rate” (GHR) means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals;
- (6) “Infirm Power” means electricity generated prior to commercial operation of the unit of a generating station;

- (7) “Installed Capacity” (IC) means the summation of the nameplate 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;
- (8) “Maximum Continuous Rating” (MCR) in relation to a unit of the thermal power generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer at rated parameters, and in relation to a unit or block of a combined cycle thermal power 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;
- (9) “Plant Load Factor” (PLF) 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:

$$PLF = 10000 * \sum_{i=1 \text{ to } N} (SG_i) / \{N \times IC \times (100 - AUX_n)\} \%$$

where,

IC = Installed Capacity of the generating station in MW,

SG_i = Scheduled Generation in MW for the i^{th} time block of the period,

N = Number of time blocks during the period, and

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

- (10) “Scheduled Generation” (SG) at any time or for any period or time block means schedule of generation in MW ex-bus given by the State Load Despatch Centre;

Note

For the 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.

- (11) “Unit” in relation to a thermal power generating station means steam generator, turbine-generator and auxiliaries, or in relation to a combined cycle thermal power generating station, means turbine-generator and auxiliaries

35. Components of tariff

- 3.2 Tariff for sale of electricity from a thermal power generating station shall comprise of two parts, namely, the recovery of annual capacity (fixed) charges and energy (variable) charges to be worked out in the manner provided hereinafter.
- 3.3 The annual capacity (fixed) charges shall consist of:
- Interest on loan capital;

- ❑ Depreciation, including Advance Against Depreciation;
- ❑ Return on equity;
- ❑ Operation and maintenance expenses;
- ❑ Interest on working capital;
- ❑ Actual expenditure incurred on terminal benefits including pension;
- ❑ Prior period expenditure.

3.4 The energy (variable) charges shall cover fuel cost.

36. Norms of operation

3.5 The norms of operation as given hereunder shall apply for existing thermal power stations of MPPGCL:

(a) Target Availability for recovery of full Capacity (Fixed) charges.

Station	FY07	FY08	FY09
ATPS, Chachai – Complex	51.36%	51.72%	52.24%
STPS Sarni - Complex	77.56%	77.98%	78.41%
SGTPS, Birsinghpur - Complex	75.50%	76.00%	77.00%

(b) Target Plant Load Factor for Incentive

Station	FY07	FY08	FY09
ATPS, Chachai – Complex	51.36%	51.72%	52.24%
STPS Sarni - Complex	77.56%	77.98%	78.41%
SGTPS, Birsinghpur - Complex	75.50%	76.00%	77.00%

(c) Gross Station Heat Rate (Kcal/kWh)

Station	FY07	FY08	FY09
ATPS, Chachai – Complex	3573	3573	3573
STPS, Sarni- Complex	2960	2926	2873
SGTPS, Birsinghpur- Complex	2825	2800	2757

(d) Secondary fuel oil consumption (ml/kWh)

Station	FY07	FY08	FY09
ATPS, Chachai –Complex	7.10	7.09	7.08

STPS, Sarni – Complex	2.66	2.66	2.66
SGTPS, Birsinghpur – Complex	2.00	2.00	2.00

- (e) Auxiliary Energy Consumption (%): The generating company should provide metering arrangements for accurate estimation of the auxiliary consumption and shall report the actual auxiliary consumption at the time of filing the petition to Commission.

Station	FY07	FY08	FY09
ATPS, Chachai –Complex	11.85%	11.73%	11.57%
STPS, Sarni – Complex	8.84%	8.77%	8.69%
SGTPS, Birsinghpur – Complex	9.62%	9.39%	9.22%

- 3.6 For generating units/stations commissioned after 01/04/2006, principles and norms as prescribed by CERC vide its order dated 26/03/2004 shall be applicable.

37. Capital cost and sale of Infirm Power

- 3.7 The capital cost of a generating company shall be worked out in accordance with the provisions of regulation 18.
- 3.8 Any revenue other than the recovery of fuel cost earned by the generating company from sale of infirm power shall be taken as reduction in capital cost and shall not be treated as revenue.

38. Operation and maintenance expenses

Per MW operation and maintenance expenses admissible to existing thermal stations of MPPGCL for the tariff period are as per the tables given below. The base year expenses shall be escalate able further at inflation rate as per the provisions of clause 2.27 to arrive at permissible operation and maintenance expenses for the relevant year of the tariff period. The norms for O&M expenses exclude taxes payable to Government or local authorities, fee payable to MPERC and pension and terminal benefits payable to its employees, which the generating company shall claim separately.

Year	Rs. in lakh/MW
FY07	11.57
FY08	12.27
FY09	13.00

For generating units/stations commissioned after 01/04/2006, principles and norms for O&M as prescribed by CERC vide its order dated 26/03/2004 shall be applicable.

39. Working capital

3.9 The Working capital shall cover:

- (a) For Coal based generating stations
 - (i) Cost of coal for 15 days for pit-head generating stations and one month for non-pit-head generating stations, corresponding to the target availability;
 - (ii) Cost of secondary fuel oil for two months corresponding to the target availability;
 - (iii) Operation and Maintenance expenses for one month;
 - (iv) Maintenance spares @ 1% of the historical cost escalated @ 4% per annum from the date of commercial operation; and
 - (v) Receivables equivalent to two months of fixed and variable charges for sale of electricity calculated on the target availability.
- (b) For Gas Turbine/Combined Cycle generating stations
 - (i) Fuel cost for one month corresponding to the target availability duly taking into account the mode of operation of the generating station on gas fuel and liquid fuel;
 - (ii) Liquid fuel stock for ½ month;
 - (iii) Operation and maintenance expenses for one month;
 - (iv) Maintenance spares at 1% of the historical cost escalated @ 4% per annum from the date of commercial operation; and
 - (v) Receivables equivalent to two months of fixed and variable charges for sale of electricity calculated on target availability.

40. SLDC and Transmission Charges

3.10 SLDC charges and Transmission Charges as determined by the Commission shall be considered as expenses if payable by the generating station.

41. Recovery of capacity charges

3.11 Full capacity charges shall be recoverable at target availability specified in regulation 36. Recovery of capacity charges below the level of target availability will be on pro rata basis. At zero availability, no capacity charges shall be payable.

3.12 Payment of capacity charges shall be on monthly basis in proportion to allocated/contracted capacity.

42. Energy charges

3.13 The energy (variable) charges shall cover fuel costs and shall be computed as follows:

Energy (variable) Charges shall cover fuel costs and shall be worked out on the basis of ex-bus energy scheduled to be sent out from the generating station as per the following formula:

Energy Charges (Rs) = Rate of Energy Charges in Rs/kWh X Scheduled Energy (ex-bus) for the month in kWh corresponding to scheduled generation.

- i. Rate of Energy Charges (REC) shall be the sum of the cost of normative quantities of primary and secondary fuel for delivering ex-bus one kWh of electricity in Rs/kWh and shall be computed as under:

$$\text{REC} = \frac{100\{P_p \times (Q_p)_n + P_s \times (Q_s)_n\}}{(100-(AUX)_n)} \quad (\text{Rs/kWh})$$

Where, P_p = Price of primary fuel namely coal or lignite or gas or liquid fuel in Rs/Kg or Rs/cum or Rs./litre, as the case may be.

$(Q_p)_n$ = Quantity of primary fuel required for generation of one kWh of electricity at generator terminals in Kg or litre or cum, as the case may be, and shall be computed on the basis of normative Gross Station Heat Rate (less heat contributed by secondary fuel oil for coal/lignite based generating stations) and gross calorific value of coal/lignite or gas or liquid fuel as fired.

P_s = Price of Secondary fuel oil in Rs./ml,

$(Q_s)_n$ = Normative Quantity of Secondary fuel oil in ml/kWh as per clause 36, as the case may be, and

AUX_n = Normative Auxiliary Energy Consumption as % of gross generation as per clause 36, as the case may be.

- ii. Adjustment of rate of energy charge (REC) on account of variation in price or heat value of fuels

Initially, Gross Calorific Value of coal/lignite or gas or liquid fuel shall be taken as per actuals of the preceding three months. Any variation shall be adjusted on month to month basis on the basis of average Gross Calorific Value of coal/lignite or gas or liquid fuel in stock, received and burnt and weighted average landed cost incurred by the generating company for procurement of coal/lignite, oil, or gas or liquid fuel, as the case may be for a power station. In its bills, generating company shall indicate rate of energy charges at base price of primary and secondary fuel specified by the commission and the fuel price adjustment to it separately. No separate petition needs to be filed with the Commission for fuel price adjustment. In case of any dispute, an appropriate application in accordance with Madhya Pradesh Electricity Regulatory Commission (Conduct of Business Regulations), 2004, shall be made before the Commission.

- iii. Landed Cost of fuel

The landed cost of fuel shall include price of fuel corresponding to the grade/quality/calorific value of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/road/gas pipe line or any other means, and, for the purpose of computation of energy charges, shall be

arrived at after considering normative transit and handling losses as percentage of the quantity of fuel dispatched by the fuel supply company during the year as given below:

Existing stations

Station	FY07	FY08	FY09
ATPS, Chachai	0.3%	0.3%	0.3%
STPS, Sarni	0.8%	0.8%	0.8%
SGTPS, Birsinghpur	1.8%	1.5%	1.2%

New Stations

For generating units/stations commissioned after 01/04/2006, principles and norms as prescribed by CERC vide its order dated 26/03/2004 shall be applicable.

43. Incentive

- 3.14 Incentive shall be payable at a flat rate of 25.0 paise/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to target Plant Load Factor.

44. Unscheduled Interchange (UI) charges

- 3.15 Variation between actual generation and scheduled generation shall be accounted for through Unscheduled Interchange (UI) Charges. UI for a generating station shall be equal to its actual generation minus its scheduled generation. UI for a buyer of electricity shall be equal to its total actual drawal minus its total scheduled drawal. UI shall be worked out for each 15 minute time block. Charges for all UI transactions shall be based on average frequency of the time block and rates as specified by MPERC. These rates for the tariff period under consideration would be as given in the table below:

Below	Not below	UI Rate (P / Unit)
---	50.5	0
50.5	50.48	6
50.48	50.46	12
---	---	---
---	---	---
49.84	49.82	204
49.82	49.8	210
49.8	49.78	219
49.78	49.76	228
---	---	---
---	---	---
49.04	49.02	561
49.02	---	570

Note:

(Each 0.02 Hz step is equivalent to 6 paise/Kwh in the 50.5-49.8 Hz frequency range and to 9 paise/Kwh in the 49.8-49.0 Hz frequency range)

- 3.16 Any generation up to 105% of the declared capacity in any time block of 15 minutes and averaging up to 101% of the average declared capacity over a day shall not be construed as gaming, and the generator shall be entitled to UI charges for such excess generation above the scheduled generation (SG).
- 3.17 For any generation beyond the prescribed limits, the State Load Despatch Centre shall investigate so as to ensure that there is no gaming, and if gaming is found by the State Load Despatch Centre, the corresponding UI charges due to the generating station on account of such extra generation shall be reduced to zero and the amount shall be adjusted in UI account of beneficiaries in the ratio of their capacity share in the generating station.

45. Scheduling

- 3.18 The methodology of scheduling and availability shall be as specified in the Grid Code approved by the Commission

46. Demonstration of declared capacity

- 3.19 The generator shall intimate the declared capacity (MW), for the next day either as one figure for the whole day or different figures for different periods of the day along with maximum available capacity (MW) and total energy (MWh) ex-bus to the State Load Despatch Centre.
- 3.20 The generating company may be required to demonstrate the declared capability of its generating station as and when asked by the State Load Despatch Centre. In the event of the generating company failing to demonstrate the declared capability, the capacity charges due to the generator shall be reduced as a measure of penalty.
- 3.21 The quantum of penalty for the first mis-declaration for any duration/block in a day shall be the charges corresponding to two days fixed charges. For the second mis-declaration the penalty shall be equivalent to fixed charges for four days and for subsequent mis-declarations in the year, the penalty shall be multiplied in the geometrical progression.
- 3.22 The operating logbooks of the generating station shall be available for review by the SLDC, as the case may be. These books shall keep record of machine operation and maintenance.

47. Metering and Accounting

- 3.23 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 and State Load Despatch Centre. 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. UI accounting procedures shall be governed by the orders of the Commission.

48. Billing and payment of capacity charges

3.24 Billing and payment of capacity charges shall be done on a monthly basis in the following manner:

- i. Each beneficiary shall pay the capacity charges in proportion to their percentage share in Installed Capacity of the generating station.
- ii. A beneficiary may surrender his share in installed capacity in favour of another beneficiary within the State. In such a circumstance, the capacity charges payable shall be revised in accordance with capacity surrendered and additional capacity acquired. Any such reallocation shall be notified by the SLDC in advance, at least 24 hours prior to such reallocation taking effect.
- iii. If any capacity remains un-requisitioned in any period, the generating company shall be free to sell electricity to any person including a person outside the State. The information regarding un-requisitioned capacity shall be made available by the generating company through their website.
- iv. The capacity charges shall be paid by the persons covered under (i) above including those outside the State to the generating company every month in accordance with the following formula:

(a) Total Capacity charges payable to the thermal power generating company for the:

$$1^{\text{st}} \text{ month} = (1 \times \text{ACC1})/12$$

$$2^{\text{nd}} \text{ month} = (2 \times \text{ACC2} - 1 \times \text{ACC1})/12$$

$$3^{\text{rd}} \text{ month} = (3 \times \text{ACC3} - 2 \times \text{ACC2})/12$$

$$4^{\text{th}} \text{ month} = (4 \times \text{ACC4} - 3 \times \text{ACC3})/12$$

$$5^{\text{th}} \text{ month} = (5 \times \text{ACC5} - 4 \times \text{ACC4})/12$$

$$6^{\text{th}} \text{ month} = (6 \times \text{ACC5} - 5 \times \text{ACC5})/12$$

$$7^{\text{th}} \text{ month} = (7 \times \text{ACC7} - 6 \times \text{ACC6})/12$$

$$8^{\text{th}} \text{ month} = (8 \times \text{ACC8} - 7 \times \text{ACC7})/12$$

$$9^{\text{th}} \text{ month} = (9 \times \text{ACC9} - 8 \times \text{ACC8})/12$$

$$10^{\text{th}} \text{ month} = (10 \times \text{ACC10} - 9 \times \text{ACC9})/12$$

$$11^{\text{th}} \text{ month} = (11 \times \text{ACC11} - 10 \times \text{ACC10})/12$$

$$12^{\text{th}} \text{ month} = (12 \times \text{ACC12} - 11 \times \text{ACC11})/12$$

(b) Each person having firm share in capacity of the generating station shall pay for the:

$$1^{\text{st}} \text{ month} = [\text{ACC1} \times \text{WB1}]/1200$$

$$2^{\text{nd}} \text{ month} = [2 \times \text{ACC2} \times \text{WB2} - 1 \times \text{ACC1} \times \text{WB1}]/1200$$

$$3^{\text{rd}} \text{ month} = [3 \times \text{ACC3} \times \text{WB3} - 2 \times \text{ACC2} \times \text{WB2}]/1200$$

$$4^{\text{th}} \text{ month} = [4 \times \text{ACC4} \times \text{WB4} - 3 \times \text{ACC3} \times \text{WB3}]/1200$$

$$5^{\text{th}} \text{ month} = [5 \times \text{ACC5} \times \text{WB5} - 4 \times \text{ACC4} \times \text{WB4}]/1200$$

$$6^{\text{th}} \text{ month} = [6 \times \text{ACC5} \times \text{WB6} - 5 \times \text{ACC5} \times \text{WB5}]/1200$$

$$7^{\text{th}} \text{ month} = [7 \times \text{ACC7} \times \text{WB7} - 6 \times \text{ACC6} \times \text{WB6}]/1200$$

$$8^{\text{th}} \text{ month} = (8 \times \text{ACC8} \times \text{WB8} - 7 \times \text{ACC7} \times \text{WB7}) / 1200$$

$$9^{\text{th}} \text{ month} = (9 \times \text{ACC9} \times \text{WB9} - 8 \times \text{ACC8} \times \text{WB8}) / 1200$$

$$10^{\text{th}} \text{ month} = (10 \times \text{ACC10} \times \text{WB10} - 9 \times \text{ACC9} \times \text{WB9}) / 1200$$

$$11^{\text{th}} \text{ month} = (11 \times \text{ACC11} \times \text{WB11} - 10 \times \text{ACC10} \times \text{WB10}) / 1200$$

$$12^{\text{th}} \text{ month} = (12 \times \text{ACC12} \times \text{WB12} - 11 \times \text{ACC11} \times \text{WB11}) / 1200$$

Where,

ACC1, ACC2, ACC3, ACC4, ACC5, ACC6, ACC7, ACC8, ACC9, ACC10, ACC11 and ACC12 are the amount of Annual Capacity Charge corresponding to 'Target Availability' for the cumulative period up to the end of 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th months respectively.

And, WB1, WB2, WB3, WB4, WB5, WB6, WB7, WB8, WB9, WB10, WB11 and WB12 are the weighted average of percentage of shared capacity during the cumulative period up to 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th month respectively.

(B) HYDRO POWER GENERATING STATIONS

49. Definitions

3.25 Unless the context otherwise requires for the purpose of this part,

- (1) "Auxiliary Energy 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 generator terminals of all the units of the generating station;
- (2) "Capacity Index" means the average of the daily capacity indices over one year;
- (3) "Daily Capacity Index" means the declared capacity expressed as a percentage of the maximum available capacity for the day and shall be mathematically expressed as hereunder:

$$\text{Daily Capacity Index} = \frac{\text{Declared Capacity (MW)}}{\text{Maximum Available Capacity (MW)}} \times 100$$

Daily capacity index shall be limited to 100%.

- (4) "Declared Capacity" (DC)
 - (a) For run-of-river power station with pondage and storage-type power stations, declared capacity means the ex-bus capacity in MW expected to be available from the generating station over the peaking hours of next day, as declared by the generator, 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 3 hours within 24 hour period, and
 - (b) In case of purely run-of-river power stations, declared capacity means 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;

- (5) “Deemed Generation” means the energy, which a generating station was capable of generating but could not generate due to the conditions of grid or power system, beyond the control of generating station resulting in spillage of water (refer clause 1.7(j)).
- (6) “Design Energy” shall mean the quantum of energy which could be generated in a 90% dependable year with 95% installed capacity of the generating station;
- (7) “Maximum Available Capacity” shall mean the following:
 - (a) Run-of-river power station with pondage 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,

Provided that the peaking hours for this purpose shall not be less than 3 hours within a 24 hours period.
 - (b) 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;
- (8) “Primary Energy” means the quantum of energy generated up to the design energy on per year basis at the generating station;
- (9) “Run-of-river power station” means a hydro electric power generating station which has no upstream pondage;
- (10) “Run –of-river power station with pondage” means a hydro electric power generating station with sufficient pondage for meeting the diurnal variation of power demand;
- (11) “Storage Type power station” means a hydro electric power generating station associated with large storage capacity to enable variation of generation of power according to demand;
- (12) “Saleable Primary Energy” means the quantum of primary energy available for sale (ex-bus);
- (13) “Secondary Energy” means the quantum of energy generated in excess of the design energy on per year basis at the generating station;
- (14) “Saleable Secondary Energy” means the quantum of secondary energy available for sale (ex-bus)
- (15) “Scheduled Energy” means the quantum of energy to be generated at the generating station over the 24-hour period, as scheduled by the State Load Despatch Centre;

- (16) “infirm power” , “installed capacity or IC” , “operation and maintenance expenses” or O&M expenses shall have the same meaning as defined elsewhere in these regulations.

50. Petition for determination of tariff

- 3.26 The provisions of regulation 16 shall apply *mutatis mutandis*, to a petition for determination of tariff of hydro generating stations.

51. Components of tariff

- 3.27 Tariff for sale of electricity from a hydro power generating station shall comprise of two parts, namely, the recovery of annual capacity charges (refer regulation 58) and energy charges to be worked out in the manner provided hereinafter.

52. Norms of operation

- 3.28 The norms of operation shall be as under, namely:

(1) Normative capacity index for recovery of full capacity charges

(a) During first year of commercial operation of the generating station

- | | | |
|--|---|-----|
| (i) Purely Run-of-river power stations | - | 85% |
| (ii) Storage type and Run-of-river power stations with pondage | - | 80% |

(b) After first year of commercial operation of the generating station

- | | | |
|--|---|-----|
| (i) Purely Run-of-river power stations | - | 90% |
| (ii) Storage type and Run-of-river power stations with pondage | - | 85% |

(2) Auxiliary energy consumption:

- | | | |
|--|---|--------------------------|
| (a) Surface hydro electric power generating stations with rotating exciters mounted on the generator shaft | - | 0.2% of energy generated |
| (b) Surface hydro electric power generating stations with static excitation system | - | 0.5% of energy generated |
| (c) Underground hydro electric power generating stations with rotating exciters mounted on the generator shaft | - | 0.4% of energy generated |
| (d) Underground hydro electric power generating stations with static excitation system | - | 0.7% of energy generated |

(3) Transformation losses

From generation voltage to transmission voltage - 0.5% of energy generated.

53. Capital Cost and sale of infirm power

- 3.29 Capital cost of hydro power generating station, including the complete hydro power generating facility covering all components such as dam, intake, water conductor system, power generating station and generating units of the scheme as apportioned to power generation, shall be determined in accordance with regulations 18-22.
- 3.30 Any revenue earned by the generating company from sale of infirm power, shall be taken as reduction in capital cost of the generating station and shall not be treated as revenue. The rate for infirm power shall be same as the primary energy rate of the generating station.

54. Operation and maintenance expenses.

- 3.31 Per MW operation and maintenance expenses admissible for the tariff period for existing Hydro generating stations of MPPGCL are as per the table given below. The base year expenses shall be escalated further at inflation rate as per the provisions of clause 2.27 to arrive at permissible operation and maintenance expenses for the relevant year of the tariff period. The norms for O&M expenses exclude taxes payable to Government or local authorities, fee payable to MPERC and pension and terminal benefits payable to its employees, which the generating company shall claim separately.

Financial year	O&M expenses (Rs. in lakhs per MW)
FY07	4.42
FY08	4.69
FY09	4.97

- 3.32 In case of the hydro electric generating stations, which have not been in existence for a period of five years, the operation and maintenance expenses shall be fixed at 1.5% of the capital cost as admitted by the Commission and shall be escalated at the rate as per the provisions of clause 2.27 from the subsequent year to arrive at base operation and maintenance expenses for the year 2003-04. The base operation and maintenance expenses shall be further escalated at the rate as per the provisions of clause 2.27 to arrive at permissible operation and maintenance expenses for the relevant year.
- 3.33 In case of the hydro electric generating stations declared under commercial operation on or after 1.4.2006, the base operation and maintenance expenses shall be fixed at 1.5% of the actual capital cost as admitted by the Commission, in the year of commissioning and shall be subject to an annual escalation as per the provisions of clause 2.27 for the subsequent years.

55. Working capital

- 3.34 The Working Capital shall cover:
- (i) Operation and Maintenance expenses for one month;
 - (ii) Maintenance spares @ 1% of the historical cost escalated @ 4% per annum from the date of commercial operation; and
 - (iii) Receivables equivalent to two months of fixed charges for sale of electricity, calculated on normative capacity index.

56. SLDC and Transmission Charges

- 3.35 SLDC Charges and Transmission Charges as determined by the Commission shall be considered as expenses, if payable by the generating stations.

57. Computation of annual capacity charges

- 3.36 The two-part tariff for sale of electricity from a hydro power generating station shall comprise of recovery of annual capacity charge and primary energy charges:
- (i) Capacity Charge: The capacity charge shall be computed in accordance with the following formula:

Capacity charge = (annual fixed charge - primary energy charge)

Note: Recovery through Primary energy charge shall not be more than Annual Fixed Charge.

(ii) Annual Fixed Charges: The total annual expenses and return on equity shall be worked out on the basis of expenses and return allowed in terms of regulations 18-30 and read with regulations 51 - 55 of these regulations.

58. Recovery of capacity charges.

3.37 Full capacity charges shall be recoverable at normative capacity index specified in regulation 52 above. Recovery of capacity (fixed) charges below the level of target availability shall be on *pro rata* basis. At zero availability, no capacity charges shall be payable.

3.38 The payment of capacity charges shall be on monthly basis in proportion to the allocated/ contracted capacity as specified in regulation 66.

59. Primary and secondary energy charges

3.39 Rate of primary energy for all hydro electric power generating stations shall be equal to the lowest variable charges of the central sector thermal power generating station in the western region. The primary energy charge shall be computed based on the primary energy rate and saleable energy of the station.

Provided that in case the primary energy charge recoverable by applying the above primary energy rate exceeds the Annual Fixed Charge of a generating station, the primary energy rate for such generating station shall be calculated by the following formula:

$$\text{Primary energy rate} = \frac{\text{Annual Fixed Charge}}{\text{Saleable Primary Energy}}$$

$$\text{Primary Energy Charge} = \text{Saleable Primary Energy} \times \text{Primary Energy Rate}$$

Secondary Energy Rate shall be equal to Primary Energy Rate.

$$\text{Secondary Energy Charge} = \text{Saleable Secondary Energy} \times \text{Secondary Energy Rate.}$$

60. Incentive:

3.40 Incentive shall be payable in case of all the generating stations, including in case of new generating stations in the first year of operation, when the capacity index (CI) exceeds 90% for purely run-of-river power generating stations and 85% for run-of-river power station with pondage or storage type power generating stations and incentive shall accrue up to a maximum capacity index of 100%.

3.41 Incentive shall be payable to the generating company in accordance with the following formula:

$$\text{Incentive} = 0.65 \times \text{Annual Fixed Charge} \times (\text{CI}_A - \text{CI}_N)/100$$

(If incentive is negative, it shall be set to zero.)

Where, CI_A is the Capacity Index achieved and CI_N is the normative capacity index whose values are 90% for purely run of the river hydro stations and 85% for pondage/storage type hydro generating stations.

- 3.42 The incentives on account of capacity index and payment for secondary energy shall be payable on monthly basis, subject to cumulative adjustment in each month of the financial year, separately in respect of each item, and final adjustment shall be made at the end of the financial year.
- 3.43 The total incentive payment calculated on annual basis shall be payable pro-rata by the beneficiaries based on the allocated capacity.

61. Incentive for completion of hydro electric power generating stations ahead of schedule

- 3.44 In case of commissioning of a hydro electric power generating station or part thereof ahead of schedule, the generating station shall become eligible for incentive for an amount equal to pro rata reduction in interest during construction, achieved on commissioning ahead of the schedule. The incentive shall be recovered through tariff in twelve equal monthly instalments during the first year of operation of the generating station. In case of delay in commissioning, interest during construction for the period of delay shall not be allowed to be capitalised for determination of tariff, unless the delay is on account of natural calamities or geological surprises.

62. Deemed generation:

- 3.45 The energy charges on account of such spillage which is categorised under “Deemed Generation” shall be payable to the generating company. Apportionment of energy charges for such spillage among the beneficiaries shall be in proportion of their shares in allocated capacity of the generating station.
- 3.46 Energy charges on the above account shall not be admissible if the energy generated during the year is equal to or more than the design energy.

63. Scheduling

- 3.47 The methodology of scheduling and availability shall be as specified in the Grid Code approved by the Commission. In addition, the following provisions shall be followed:
- 3.48 The generator shall intimate the declared capacity (MW), for the next day, either as one figure for the whole day or different figures for different periods of the day along with maximum available capacity (MW) and total energy (MWh) ex-bus to the State Load Despatch Centre.

While making or revising his declaration of capability, the generator shall ensure that the declared capacity during peak hours is not less than that during other hours. However, exception to this rule shall be allowed in case of tripping/re-synchronisation of units as a result of forced outage of units.

Declaration of available capacity should also include limitation on generation during specific time periods, if any, on account of restriction(s) on water use due to irrigation, drinking water, industrial, environmental considerations etc.

It is clarified that:

- (i) For Purely run-of-river power stations

Since variation of generation in such stations may lead to spillage, these shall be treated as must run stations. The maximum available capacity, duly taking into account the over load capability, must be equal to or greater than that required to make full use of the available water.

- (ii) For run-of-river power station with pondage and storage type power stations

These hydro stations are designed to operate during peak hours to meet system peak demand. Maximum available capacity of the station declared for the day shall be equal to the installed capacity including overload capability, minus auxiliary consumption and transformation losses, corrected for the reservoir level. The State Load Despatch Centre shall ensure that generation schedules of such type of stations are prepared and the stations dispatched for optimum utilization of available hydro energy except in the event of specific system requirements/constraints.

- 3.49 Based on the declaration of the generator, the State Load Despatch Centre shall communicate their shares to the beneficiaries out of which they shall give their requisitions.
- 3.50 Based on the requisitions given by the beneficiaries and taking into account technical limitations on varying the generation and also taking into account transmission system constraints, if any, the State Load Despatch Centre shall prepare the economically optimal generation schedules and drawal schedules and communicate the same to the generator and the beneficiaries.
- 3.51 The State Load Despatch Centre shall also formulate the procedure for meeting contingencies both in the long run and in the short run (Daily scheduling).
- 3.52 The scheduled generation and actual generation shall be ex-bus at the generating station. For beneficiaries, the scheduled and actual net drawals shall be at their respective receiving points.
- 3.53 For calculating the net drawal schedules of beneficiaries, the transmission losses shall be apportioned to their drawal schedule for the time being. However, a refinement may be specified by the Commission in future, depending upon the preparedness of the respective State Load Despatch Centre.
- 3.54 In case of forced outage of a unit, the State Load Despatch Centre shall revise the schedules on the basis of revised declared capability. The revised declared capability and the revised schedules shall become effective from the 4th time block, counting the time block in which the revision is advised by the generator to be the first one.
- 3.55 In the event of bottleneck in evacuation of power due to any constraint, outage, failure or limitation in the transmission system, associated switchyard and sub-stations owned by the State Transmission Utility or any other transmission licensee involved in intra-state transmission (as certified by the State Load Despatch Centre) necessitating reduction in generation, the State Load Despatch Centre shall revise the schedules which shall become effective from the 4th time block, counting the time block in which the bottleneck in evacuation of power has taken place to be the first one. Also, during the first, second and third time blocks of such an event, the scheduled generation of the generating station shall be deemed to have been revised to be equal to actual generation, and the scheduled drawals of the beneficiaries shall be deemed to have been revised to be equal to their actual drawals.

- 3.56 In case of any grid disturbance, scheduled generation of all the generating stations and scheduled drawal of all the beneficiaries shall be deemed to have been revised to be equal to their actual generation/drawal for all the time blocks affected by the grid disturbance. Certification of grid disturbance and its duration shall be done by the State Load Despatch Centre.
- 3.57 Revision of declared capability by the generator(s) and requisition by beneficiary(ies) for the remaining period of the day shall also be permitted with advance notice. Revised schedules/declared capability in such cases shall become effective from the 6th time block, counting the time block in which the request for revision has been received in the State Load Despatch Centre to be the first one.
- 3.58 If, at any point of time, the State Load Despatch Centre observes that there is need for revision of the schedules in the interest of better system operation, it may do so on its own and in such cases, the revised schedules shall become effective from the 4th time block, counting the time block in which the revised schedule is issued by the State Load Despatch Centre to be the first one.
- 3.59 Generation schedules and drawal schedules issued/revised by the State Load Despatch Centre shall become effective from the designated time block irrespective of communication success.
- 3.60 For any revision of scheduled generation, including post facto deemed revision, there shall be a corresponding revision of scheduled drawals of the beneficiaries.
- 3.61 A procedure for recording the communication regarding changes to schedules duly taking into account the time factor shall be evolved by the State Transmission Utility.

64. Demonstration of Declared Capability.

- 3.62 The provisions of regulation 46 shall be applicable for hydro power stations which shall be subject to scheduling as per the State Grid Code.

65. Metering and Accounting.

- 3.63 The provisions of regulation 47 shall apply for hydro power stations also.

66. Billing and Payment of Capacity Charges.

- 3.64 Billing and payment of capacity charges shall be done on a monthly basis,
- (i) The capacity charges shall be paid by the beneficiary to the generating company every month in accordance with the following formulas and in proportion to their respective shares in the concerned generating station:

$$\begin{aligned}
 ACC_1 &= AFC - (SPE1 + DE_{2nd \text{ to } 12th \text{ months}}) * \text{Primary Energy Rate} \\
 ACC_2 &= AFC - (SPE2 + DE_{3rd \text{ to } 12th \text{ months}}) * \text{Primary Energy Rate} \\
 ACC_3 &= AFC - (SPE3 + DE_{4th \text{ to } 12th \text{ months}}) * \text{Primary Energy Rate} \\
 ACC_4 &= AFC - (SPE4 + DE_{5th \text{ to } 12th \text{ months}}) * \text{Primary Energy Rate} \\
 ACC_5 &= AFC - (SPE5 + DE_{6th \text{ to } 12th \text{ months}}) * \text{Primary Energy Rate} \\
 ACC_6 &= AFC - (SPE6 + DE_{7th \text{ to } 12th \text{ months}}) * \text{Primary Energy Rate} \\
 ACC_7 &= AFC - (SPE7 + DE_{8th \text{ to } 12th \text{ months}}) * \text{Primary Energy Rate} \\
 ACC_8 &= AFC - (SPE8 + DE_{9th \text{ to } 12th \text{ months}}) * \text{Primary Energy Rate} \\
 ACC_9 &= AFC - (SPE9 + DE_{10th \text{ to } 12th \text{ months}}) * \text{Primary Energy Rate}
 \end{aligned}$$

$$\begin{aligned} \text{ACC}_{10} &= \text{AFC} - (\text{SPE}_{10} + \text{DE}_{11\text{th to }12\text{th months}}) * \text{Primary Energy Rate} \\ \text{ACC}_{11} &= \text{AFC} - (\text{SPE}_{11} + \text{DE}_{12\text{th month}}) * \text{Primary Energy Rate} \\ \text{ACC}_{12} &= \text{AFC} - (\text{SPE}_{12}) * \text{Primary Energy Rate} \end{aligned}$$

Where,

AFC = Annual Fixed Charges

ACC₁, ACC₂, ACC₃, ACC₄, ACC₅, ACC₆, ACC₇, ACC₈, ACC₉, ACC₁₀, ACC₁₁ and ACC₁₂ are the amount of Annual Capacity Charge for the cumulative period up to the end of 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th months respectively.

SPE₁, SPE₂, SPE₃,..... SPE₁₂ are the ex-bus scheduled primary energy values up to 1st, 2nd, 3rd12th months of the year respectively.

CC₁, CC₂, CC₃,.....CC₁₂ is the monthly capacity charge up to 1st, 2nd, 3rd12th months of the year respectively determined as under:

DE = Annual Design Energy

DE₁, DE₂, DE₃,DE₁₂ are the ex-bus design energy values up to 1st, 2nd, 3rd12th months of the year respectively.

$$\text{CC}_1 = \text{ACC}_1 \times \frac{\text{DE}_1}{\text{DE}}$$

$$\text{CC}_2 = \text{ACC}_2 \times \frac{\text{DE}_2}{\text{DE}}$$

$$\text{CC}_3 = \text{ACC}_3 \times \frac{\text{DE}_3}{\text{DE}}$$

$$\text{CC}_4 = \text{ACC}_4 \times \frac{\text{DE}_4}{\text{DE}}$$

$$\text{CC}_5 = \text{ACC}_5 \times \frac{\text{DE}_5}{\text{DE}}$$

$$\text{CC}_6 = \text{ACC}_6 \times \frac{\text{DE}_6}{\text{DE}}$$

$$\text{CC}_7 = \text{ACC}_7 \times \frac{\text{DE}_7}{\text{DE}}$$

$$\text{CC}_8 = \text{ACC}_8 \times \frac{\text{DE}_8}{\text{DE}}$$

$$\text{CC}_9 = \text{ACC}_9 \times \frac{\text{DE}_9}{\text{DE}}$$

$$\text{CC}_{10} = \text{ACC}_{10} \times \frac{\text{DE}_{10}}{\text{DE}}$$

$$\text{CC}_{11} = \text{ACC}_{11} \times \frac{\text{DE}_{11}}{\text{DE}}$$

$$CC12 = ACC_{12} \times \underline{DE12}$$

DE

Total capacity charges payable to the generator for the:

$$1^{\text{st}} \text{ month} = (CC1)$$

$$2^{\text{nd}} \text{ month} = (CC2 - CC1)$$

$$3^{\text{rd}} \text{ month} = (CC3 - CC2)$$

$$4^{\text{th}} \text{ month} = (CC4 - CC3)$$

$$5^{\text{th}} \text{ month} = (CC5 - CC4)$$

$$6^{\text{th}} \text{ month} = (CC6 - CC5)$$

$$7^{\text{th}} \text{ month} = (CC7 - CC6)$$

$$8^{\text{th}} \text{ month} = (CC8 - CC7)$$

$$9^{\text{th}} \text{ month} = (CC9 - CC8)$$

$$10^{\text{th}} \text{ month} = (CC10 - CC9)$$

$$11^{\text{th}} \text{ month} = (CC11 - CC10)$$

$$12^{\text{th}} \text{ month} = (CC12 - CC11)$$

and, each beneficiary having firm allocation in capacity of the generating station shall pay for the :

$$1^{\text{st}} \text{ month} = [CC1 \times WB1]/100$$

$$2^{\text{nd}} \text{ month} = [CC2 \times WB2 - CC1 \times WB1]/100$$

$$3^{\text{rd}} \text{ month} = (CC3 \times WB3 - CC2 \times WB2)/100$$

$$4^{\text{th}} \text{ month} = (CC4 \times WB4 - CC3 \times WB3)/100$$

$$5^{\text{th}} \text{ month} = (CC5 \times WB5 - CC4 \times WB4)/100$$

$$6^{\text{th}} \text{ month} = (CC6 \times WB6 - CC5 \times WB5)/100$$

$$7^{\text{th}} \text{ month} = (CC7 \times WB7 - CC6 \times WB6)/100$$

$$8^{\text{th}} \text{ month} = (CC8 \times WB8 - CC7 \times WB7)/100$$

$$9^{\text{th}} \text{ month} = (CC9 \times WB9 - CC8 \times WB8)/100$$

$$10^{\text{th}} \text{ month} = (CC10 \times WB10 - CC9 \times WB9)/100$$

$$11^{\text{th}} \text{ month} = (CC11 \times WB11 - CC10 \times WB10)/100$$

$$12^{\text{th}} \text{ month} = (CC12 \times WB12 - CC11 \times WB11)/100$$

Where,

And, WB1, WB2, WB3, WB4, WB5, WB6, WB7, WB8, WB9, WB10, WB11 and WB12 are the weighted average of percentage allocated capacity share of the beneficiary during the cumulative period up to 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th month respectively.

CHAPTER IV
MISCELLANEOUS

67. Power to remove difficulties

- 4.1 If any difficulty arises in giving effect to any of the provisions of these regulations, the Commission may, by general or special order, do or undertake or direct the generating company to do or undertake things, which in the opinion of the Commission is necessary or expedient for the purpose of removing the difficulties.

68. Power to Amend

- 4.2 The Commission may, at any time add, vary, alter, modify or amend any provisions of these regulations.

69. Savings

- 4.3 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 for ends of justice to meet or to prevent abuses of the process of the Commission.
- 4.4 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 this Code, 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.
- 4.5 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 Codes 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

Ashok Sharma, Deputy Secretary

Annexure-I

Depreciation Schedule			
Description of Assets	Useful Life (yrs)	Rate (Calculated w.r.t. 90%)	
	1	2	3=1*2
A. Land owned under full title	Infinity	---	
B. Land held under lease:			
(a) for investment in land.	The period of lease or the period remaining unexpired on the assignment of the lease.	---	
(b) for cost of clearing site	The period of lease remaining unexpired at the date of clearing	---	

Depreciation Schedule			
Description of Assets	Useful Life (yrs)	Rate (Calculated w.r.t. 90%)	
	1	2	3=1*2
	the site.		
C. Assets:			
Purchased new:			
(a) Plant and machinery in generating Stations including plant foundations: -			
(i) Hydro-electric	35	2.57	90
(ii) Steam-electric NHRS & Waste Heat Recovery Boilers/Plants	25	3.60	90
(iii) Diesel-electric & gas plant	15	6.00	90
(b) Cooling towers and circulating water Systems	25	3.60	90
(c) Hydraulic works forming part of hydro-electric system including:-			
(i) Dams, Spilways weirs, canals reinforced concrete flumes & syphons	50	1.80	90
(ii) Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and other hydraulic works.	35	2.57	90
(d) Building & civil engineering works of a Permanent character, not mentioned above:			
(i) Offices & showrooms	50	1.80	90
(ii) Containing thermo-electric generating Plant	25	3.60	90
(iii) Containing hydro-electric generating Plant	35	2.57	90
(iv) Temporary erection such as wooden Structures	5	18.00	90
(v) Roads other than kutchra roads	50	1.80	90
(vi) Others	50	1.80	90
(e) Transformers, transformer (Kiosk) sub-station equipment & other fixed apparatus			

Depreciation Schedule			
Description of Assets	Useful Life (yrs)	Rate (Calculated w.r.t. 90%)	
	1	2	3=1*2
(including plant foundations)			
(i) Transformers (including foundations) having a rating of 100 kilo volt Amperes and over	25	3.60	90
(ii) Others	25	3.60	90
(f) Switchgear, including cable connections	25	3.60	90
(g) Lightning arrestors:			
(i) Station type	25	3.60	90
(ii) Pole type	15	6.00	90
(iii) Synchronous condensor	35	2.57	90
(h) Batteries:	5	18.00	90
(i) Underground Cable including joint boxes and disconnected boxes	35	2.57	90
(ii) Cable duct system	50	1.80	90
(I) Overhead lines including supports:			
(i) Lines on fabricated steel operating at nominal voltages higher than 66 KV	35	2.57	90
(ii) Lines on steel supports operating at Nominal voltages higher than 13.2 Kilo volts but not exceeding 66 Kilo volts	25	3.60	90
(iii) Lines on steel or reinforced concrete supports	25	3.60	90
(iv) Lines on treated wood supports	25	3.60	90
(j) Meters	15	6.00	90
(k) Self propelled vehicles	5	18.00	90
(l) Air conditioning plants:			
(i) Static	15	6.00	90
(ii) Portable	5	18.00	90
(m)			
(i) Office furniture and fittings	15	6.00	90
(ii) Office equipments:	15	6.00	90
(iii) Internal wiring including fittings and	15	6.00	90

Depreciation Schedule			
Description of Assets	Useful Life (yrs)	Rate (Calculated w.r.t. 90%)	
	1	2	3=1*2
Apparatus			
(iv) Street light fittings	15	6.00	90
(o) Apparatus let on hire:			
(i) Other than motors	5	18.00	90
(ii) Motors	15	6.00	90
(p) Communication equipment:			
(i) Radio and higher frequency carrier System	15	6.00	90
(ii) Telephone lines and telephones	15	6.00	90
(q) Assets purchased second hand and assets not otherwise provided for in the schedule	Such reasonable period as the competent Government determines in each case having regard to the nature, age and condition of the assets at the time of its acquisition by the owner.		