

**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION  
(TERMS AND CONDITIONS OF TARIFF) REGULATIONS 2005**

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# MAHARASHTRA ELECTRICITY REGULATORY COMMISSION (TERMS AND CONDITIONS OF TARIFF) REGULATIONS 2005

## ELECTRICITY ACT, 2003.

No. [MERC/Legal/132/2005/1718]- In exercise of the powers conferred by clause (h), (i), (j), (l), (m), (o), (y), (zd), (ze), (zf), (zg), (zh) and (zp) of sub-section (2) of section 181 read with the proviso to Section 36, sub-clause (ii) of clause (d) of sub-section (2) of Section 39, second proviso to sub-clause (ii) of clause (d) of sub-section (2) of Section 39, sub-clause (ii) of clause (c) of Section 40, second proviso to sub-clause (ii) of clause (c) of Section 40, first proviso to Section 41, first proviso to Section 51, Section 61, sub-sections (2) and (5) of Section 62, sub-sections (1) and (3) of Section 64, Section 65 and clause (b) of sub-section (1) of Section 86 of the Electricity Act, 2003 (36 of 2003), the Maharashtra Electricity Regulatory Commission hereby makes the following regulations. These Regulations supersede the "Maharashtra Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004"

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

- 1.1 These Regulations may be called the Maharashtra Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2005.
- 1.2 These Regulations shall extend to the whole of the State of Maharashtra 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**

- 2.1 In these Regulations unless the context otherwise requires:
  - (a) “**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’;
    - (v) cost records prescribed by the Central Government under Section 209(1)(d) of the Companies Act, 1956;together with notes thereto, and such other supporting statements and information as the Commission may direct from time to time;

Provided that in case of any local authority engaged in the business of distribution of electricity, the Accounting Statement shall mean the items, as mentioned above, prepared and maintained in accordance with the relevant Acts or Statutes as applicable to such local authority.

- (b) “**Act**” means the Electricity Act, 2003 (36 of 2003), including amendments thereto;
- (c) “**Allocation Statement**” means for each financial year, a statement in respect of each of the separate businesses of the Licensee, showing the amounts of any revenue, cost, asset, liability, reserve or provision, which has been either:
  - (i) charged from or to each such separate business together with a description of the basis of that charge; or
  - (ii) determined by apportionment or allocation between the Licensed Business and every other separate business of the Licensee, together with a description of the basis of the apportionment or allocation;

Provided that such allocation statement in respect of a generating station shall be maintained in a manner so as to enable tariff determination, stage-wise, unit wise or for the whole generating station as provided in Regulation 27 of these Regulations.

- (d) “**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 of 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;
- (e) “**Aggregate Revenue Requirement**” means the requirement of the Licensee for recovery, through tariffs, of allowable expenses and return on capital pertaining to his Licensed Business, in accordance with these Regulations;
- (f) “**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;

- (g) “**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:

$$\text{Availability} = 10000 \times \frac{\sum_{i=1}^N DC_i}{\{ N \times IC \times (100 - AUX_n) \}} \%$$

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

DC = Average Declared Capacity for the  $i^{\text{th}}$  time block in such period

IC = Installed Capacity of the generating station in MW

AUX = Normative Auxiliary Consumption in MW, expressed as a percentage of gross generation

- (h) “**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 and shall be calculated as provided in Annexure-II to these Regulations;
- (i) “**Balancing and Settlement Code**” refers to such code as may be stipulated by the Commission or as may be published by the State Load Despatch Centre and approved by the Commission, for the balancing of energy accounts and settlement of differences between energy scheduled and actual energy among the users of the grid in the State of Maharashtra;
- (j) “**Block**” in relation to a combined cycle thermal generating station includes combustion turbine – generators, associated waste heat recovery boilers, connected steam turbine – generators and auxiliaries;
- (k) “**Bulk Power Transmission Agreement**” means an agreement that contains the terms and conditions under which a Transmission System User is entitled to the access to an intra-State transmission system of a Transmission Licensee;
- (l) “**Commission**” means the Maharashtra Electricity Regulatory Commission;
- (m) “**Conduct of Business Regulations**” means such regulations as may be specified under clause (zl) of sub-section (2) of Section 181 read with sub-section (1) of Section 92 of the Act;
- (n) “**Control Period**” means a period comprising one or more financial years, as may be stipulated by the Commission, for submission of forecast in accordance with Part C of these Regulations;

- (o) “**Cut-off Date**” means the date of the first financial year closing after three hundred and sixty-five (365) days of the date of commissioning of a generating station;
- (p) “**Daily Capacity Index**” means the declared capacity expressed as a percentage of the maximum available capacity for the day and shall be calculated in accordance with the following formula:

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

and the term “**Capacity Index**” for any period shall be the average of the daily capacity indices calculated as above, for such period;

- (q) “**Date of commissioning**” means-
  - (i) in relation to a unit of a generating station, means the date declared by the Generating Company after demonstrating the Maximum Continuous Rating or Installed Capacity through a successful trial run;
  - (ii) in relation to a generating station, the date of commissioning of the last unit or block of the generating station in accordance with clause (i) above; and
  - (iii) in relation to a capital expenditure project relating to the Transmission Business, Distribution Business or Retail Supply Business of a Licensee, the date on which the project is ready to be put to commercial use;
- (r) “**Declared Capacity**” means-
  - (i) 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;

- (ii) for run-of-river hydro power generating stations with pondage 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;
- (iii) 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;

- (s) “**Deemed Generation**” means the energy which a hydro power generating station was capable of generating but could not generate due to reasons beyond the control of the generating station or on account of non-availability of Transmission Licensee's transmission lines or on receipt of backing down instructions from the State Load Despatch Centre resulting in spillage of water;
- (t) “**Design Energy**” in relation to a hydro power generating station means the quantum of energy which could be generated in a 90 per cent dependable year with 95 per cent installed capacity of the generating station;
- (u) “**Distribution Business**” means the business of operating and maintaining a distribution system for supplying electricity in the area of the supply of the Distribution Licensee;
- (v) “**Distribution Open Access Regulations**” means the regulations as may be specified by the Commission under sub-section (47) of Section 2 read with sub-section (2), (3) and (4) of Section 42 of the Act;
- (w) “**Existing Generating Station**” means a generating station which had a date of commissioning prior to the date of notification of these Regulations;
- (x) “**Expected Revenue from Tariff and Charges**” means the revenue estimated to accrue to the Licensee from the Licensed Business at the prevailing tariffs;
- (y) “**Fees and Charges Regulations**” means such regulations as may be specified under clause (zp) of sub-section (2) of Section 181 read with clause (g) of sub-section (1) of Section 86 of the Act;
- (z) “**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:
  - (i) acts of God, including but not limited to lightning, storm, action of the elements, earthquakes, flood, drought and natural disaster;
  - (ii) strikes, lockouts, go-slow, bandh or other industrial disturbances;
  - (iii) acts of public enemy, wars (declared or undeclared), blockades, insurrections, riots, revolution, sabotage, vandalism and civil disturbance;
  - (iv) unavoidable accident, including but not limited to fire, explosion, radioactive contamination and toxic dangerous chemical contamination;
  - (v) 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

- (vi) any shut down or interruption, which is required to avoid serious and immediate risks of a significant plant or equipment failure;
- (za) “**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;
- (zb) “**Gross Calorific Value**” in relation to a thermal generating station means the heat produced in kCal by complete combustion of one kilogram of solid fuel or one litre of liquid fuel or one standard cubic meter of gaseous fuel, as the case may be;
- (zc) “**Gross Station Heat Rate**” means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals;
- (zd) “**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;
- (ze) “**Maximum Available Capacity**” in relation to a hydro power generating station means-
  - (i) for run-of-river hydro power generating stations with pondage and storage-type power stations, the maximum capacity in MW that the generating station can generate with all units running under prevailing conditions of water levels available for usage and flows over the peaking hours of the next day, and for this purpose, the peaking hours shall not be less than three (3) hours within a twenty-four (24) hour period;
  - (ii) for purely run-of-river hydro power generating stations, the maximum capacity in MW that the generating station can generate with all units running under prevailing conditions of water levels available for usage and flows over the peaking hours of the next day;
- (zf) “**New Generating Station**” means a generating station with a date of commissioning on or after the date of notification of these Regulations;
- (zg) “**Non-Tariff Income**” means income relating to the Licensed Business other than from tariff, excluding any income from Other Business and, in case of the Retail Supply Business of a Distribution Licensee, excluding income from wheeling and receipts on account of cross-subsidy surcharge and additional surcharge on charges of wheeling;
- (zh) “**Officer**” means an officer of the Commission;
- (zi) “**Other Business**” means any business engaged in by a Transmission Licensee under Section 41 of the Act or by a Distribution Licensee under Section 51 of the Act for optimum utilization of the assets of such Transmission Licensee or of such Distribution Licensee;

- (zj) “**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:

$$\text{Plant Load Factor (\%)} = 10000 \times \sum_{i=1}^N \text{SG}_i / \{ N \times \text{IC} \times (100 - \text{AUX}_n) \} \%$$

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

SG = 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 = Normative Auxiliary Consumption in MW, expressed as a percentage of gross generation

- (zk) “**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;
- (zl) “**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;
- (zm) “**Run-of-river power station**” means a hydro power generating station with or without upstream pondage;
- (zn) “**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;
- (zo) “**Secretary**” means the Secretary to the Commission;
- (zp) “**Standards of Performance Regulations**” means the regulations as may be specified by the Commission under Section 57 and Section 59 of the Act;
- (zq) “**Storage type power station**” means a hydro power generating station associated with large storage capacity to enable variation in generation of electricity according to demand;
- (zr) “**Transmission Business**” means the business of establishing or operating transmission lines;
- (zs) “**Transmission Open Access Regulations**” means the regulations as may be specified by the Commission under sub-section (47) of Section 2 read with Section 30 of the Act;

- (zt) “**Transmission System User**” means a person who has been allotted transmission capacity rights to access an intra-state transmission system pursuant to a Bulk Power Transmission Agreement, except as provided in the Transmission Open Access Regulations;
- (zu) “**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.

2.2 Words or expressions used herein and not defined shall have the meanings assigned to them in the Act, Rules or Regulations.

## **PART A: GENERAL**

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

3.1 The Commission shall determine tariff, including terms and conditions therefore, for all matters for which the Commission has the power under the Act, including in the following cases:-

(i) Supply of electricity by a Generating Company to a Distribution Licensee:

Provided that where the Commission believes that a shortage of supply of electricity exists, it may fix the minimum and maximum ceiling of tariff for sale or purchase of electricity in case of an agreement entered into between a Generating Company and a Licensee or between Licensees, for a period not exceeding one year;

(ii) Intra-State transmission of electricity;

(iii) Rates and charges for use of intervening transmission facilities, where these cannot be mutually agreed upon by the Licensees;

(iv) Wheeling of electricity;

(v) Retail sale of electricity:

Provided that in case of distribution of electricity in the same area by two or more Distribution Licensees, the Commission may, for promoting competition among Distribution Licensees, fix only maximum ceiling of tariff for retail sale of electricity:

Provided further that where the Commission has allowed open access to certain consumers under Section 42, such consumers, notwithstanding the provisions of clause (d) of sub-section (1) of Section 62, may enter into an agreement with any person for supply or purchase of electricity on such terms and conditions (including tariff) as may be agreed upon by them;

(vi) Surcharge in addition to the charges for wheeling under the first proviso to sub-section (2) of Section 42 of the Act, in accordance with the Distribution Open Access Regulations;

(vii) Additional surcharge on the charges for wheeling under sub-section (4) of Section 42 of the Act, in accordance with the Distribution Open Access Regulations.

3.2 Where the Commission has permitted open access to any consumer or category of consumers under Section 42 of the Act, the Commission shall determine only the wheeling charges, in accordance with Part G of these Regulations, and surcharge, in accordance with the Distribution Open Access Regulations, for such consumer or category of consumers who have availed of Distribution Open Access.

3.3 Notwithstanding anything contained in Part X of the Act, the tariff for any inter-State supply, transmission or wheeling of electricity, as the case may be, involving the territories of the two States may, upon application made to it by the parties

intending to undertake such supply, transmission or wheeling, be determined by the Commission in cases where the Licensee intending to distribute electricity and make payment therefor is under the Commission's jurisdiction:

Provided that the Commission shall determine such tariff having regard to the terms and conditions contained in Part F, Part G and Part H of these Regulations for applications under this Regulation for determination of tariff for transmission, wheeling and supply of electricity respectively:

Provided further that the Commission, while determining tariff upon an application made to it under this Regulation, shall also have regard to the terms and conditions of tariff as may be specified by the State Commission of such other State and/ or the terms and conditions of tariff as may be specified by the Central Commission where any of the parties to such transaction come under the jurisdiction of such State Commission or of the Central Commission.

- 3.4 Notwithstanding anything contained in these Regulations, the Commission shall adopt the tariff if such tariff has been determined through a transparent process of bidding in accordance with the guidelines issued by the Central Government.

#### **4 Guiding principles**

- 4.1 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.
- 4.2 The Commission shall not, while determining the tariff under the Act, show preference to any consumer of electricity but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any stipulated period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.

#### **5 Alternative terms and conditions**

- 5.1 A Generating Company or Licensee, as the case may be, may agree to any terms and conditions that may vary from the terms and conditions contained in these Regulations where the terms and conditions agreed upon will result in a lower total cost of supply of electricity to consumers in the State during the entire duration of the agreement of which such terms and conditions form part:

Provided that such agreement shall come into effect only with the previous approval of the Commission, except where such approval is not specifically required under the Act or these Regulations.

## **PART B: PROCEDURE FOR DETERMINATION OF TARIFF**

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### **6 Procedures relating to making an application for determination of tariff**

- 6.1 An application for determination of tariff under the Act shall be made in such form and in such manner as specified in this Regulation, and accompanied by such fees as may be specified under the Fees and Charges Regulations.

The proceedings to be held by the Commission for determination of tariff shall be in accordance with the Conduct of Business Regulations.

- 6.2 Notwithstanding anything contained in these Regulations, 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 any Licensee or Generating Company:

Provided that such determination of tariff may be pursuant to an agreement or arrangement or otherwise whether or not previously approved by the Commission and entered into at any time before or after the commencement of the Act:

### **7 Determination of generation tariff**

- 7.1 Existing generating station

- 7.1.1 Where the Commission has, at any time prior to the notification of these Regulations, approved a power purchase agreement or arrangement between a Generating Company and a Distribution Licensee or has adopted the tariff contained therein for supply of electricity from an existing generating station then the tariff for supply of electricity by the Generating Company to the Distribution Licensee shall be in accordance with such power purchase agreement or arrangement for such period as may be so approved or adopted by the Commission.

- 7.1.2 Where, as at the date of notification of these Regulations, the power purchase agreement or arrangement between a Generating Company and a Distribution Licensee for supply of electricity from an existing generating station has not been approved by the Commission or the tariff contained therein has not been adopted by the Commission or where there is no power purchase agreement or arrangement, then the supply of electricity by such Generating Company to such Distribution Licensee after the date of notification of these Regulations shall be in accordance with a power purchase agreement approved by the Commission in accordance with **Part D** of these Regulations:

Provided that an application for approval of such power purchase agreement or arrangement shall be made by the Generating Company or the Distribution Licensee to the Commission within a period of three (3) months from the date of notification of these Regulations:

Provided further that the supply of electricity shall be allowed to continue under the present agreement or arrangement, as the case may be, until such time as the Commission approves of such power purchase agreement and shall be discontinued forthwith if the Commission rejects, for reasons recorded in writing, such power purchase agreement.

7.2 New generating stations

7.2.1 The tariff for the supply of electricity by a Generating Company to a Distribution Licensee from a new generating station shall be in accordance with a power purchase agreement approved by the Commission, except if such power purchase agreement has been exempted from requiring such approval in accordance with **Part D** of these Regulations.

7.3 Own generating stations

7.3.1 Where the Distribution Licensee also undertakes the business of generation of electricity, the transfer price at which electricity is supplied by the Generation Business of the Distribution Licensee to his Retail Supply Business shall be determined by the Commission:

Provided that the Commission shall have regard to the terms and conditions specified in **Part E** of these Regulations in determining the transfer price for such supply.

7.3.2 The Distribution Licensee shall maintain separate records for the Generation Business and shall maintain an Allocation Statement so as to enable the Commission to clearly identify the direct and indirect costs relating to such business and return on equity accruing to such business.

7.3.3 The Distribution Licensee shall submit, along with the application for determination of tariff for retail sale of electricity, the information required under Part E of these Regulations relating to the Generation Business, so as to enable the Commission determine the transfer price for supply of electricity to the Retail Supply Business in accordance with the terms and conditions contained in the said Part.

7.4 Notwithstanding anything contained in this Regulation 7, the Commission shall adopt the tariff for supply of electricity by a Generating Company to a Distribution Licensee if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government:

Provided that the applicant shall provide such information as the Commission may require to satisfy itself that the guidelines issued by the Central Government have been duly followed.

**8 Determination of tariff for transmission, wheeling and retail sale of electricity**

8.1 The Commission shall determine the tariff for transmission, wheeling and retail sale of electricity based on an application made by the Licensee in accordance with the procedure contained in this Regulation 8.

8.2 The Commission shall determine the tariff for-

- (a) transmission of electricity, in accordance with the terms and conditions contained in **Part F** of these Regulations;
- (b) wheeling of electricity, in accordance with the terms and conditions contained in **Part G** of these Regulations; and
- (c) retail sale of electricity, in accordance with the terms and conditions contained in **Part H** of these Regulations.

- 8.3 The applicant shall provide, as part of his application to the Commission, in such form as may be stipulated by the Commission from time to time, full details of his calculation of the aggregate revenue requirement and expected revenue from tariff and charges pursuant to the terms of his licence, and thereafter he shall furnish such further information or particulars or documents as the Commission or the Secretary or any Officer designated for the purpose by the Commission may reasonably require to assess such calculation:

Provided that the application shall be accompanied where relevant, by a detailed tariff revision proposal showing how such revision would meet the gap, if any, in aggregate revenue requirement.

Provided further that the Commission may specify additional/ alternative formats for details to be submitted by the applicant, from time to time, as it may reasonably require for assessing the aggregate revenue requirement and for determining the tariff, as the case may be.

- 8.4 Upon receipt of a complete application accompanied by all requisite information, particulars and documents in compliance with all the requirements specified in these Regulations, the application shall be deemed to be received and the Commission or the Secretary or the designated Officer shall intimate to the applicant that the application is ready for publication.

- 8.5 The applicant shall, within three (3) days of an intimation provided to him in accordance with Regulation 8.4, publish a notice, in at least two (2) English and two (2) Marathi language daily newspapers widely circulated in the area to which the application pertains, outlining the proposed tariff, and such other matters as may be stipulated by the Commission, and inviting objections from the public:

Provided that the applicant shall make available a hard copy of the complete application, to any interested party, at such locations and at such rates as may be stipulated by the Commission:

Provided further that the applicant shall also put up on his internet website, in downloadable spreadsheet format showing detailed computations, the application made to the Commission along with all regulatory filings, information, particulars and documents submitted to the Commission along with the application:

Provided further that web-link to the information mentioned in the second proviso to Regulation 8.5 above shall be easily accessible, archived for downloading and shall be prominently displayed on his internet website:

Provided however, that the applicant may not provide or put up any such information, particulars or documents which are confidential in nature, with the previous approval of the Commission.

Explanation – for the purpose of this Regulation, the term “downloadable spreadsheet format” shall mean one (or multiple, linked) spreadsheet software files containing all assumptions, formulae, calculations, software macros and outputs forming the basis of the application.

- 8.6 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.

8.7 The Commission may, if it deems necessary, make or cause to be made 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) on such terms and conditions as may be specified in the Conduct of Business Regulations:

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.

8.8 The procedural aspects pertaining to applications contained in this Regulation 8 shall apply, only to such extent as may be required by the Commission having regard to the circumstances of an individual case, to -

- (a) an application made by a Licensee under the proviso to sub-section (1) of Section 36 of the Act;
- (b) an application made by a Distribution Licensee under sub-section (5) of Section 64 of the Act.

## **9 Time limit for making an application for determination of tariff**

9.1 An application for determination of tariff shall be made to the Commission not less than one hundred and twenty (120) days before the date on which such tariff is intended to be made effective:

Provided that the date of receipt of application for the purpose of this Regulation shall be the date of intimation about receipt of a complete application in accordance with Regulation 8.4 above:

Provided further that under a multi-year tariff framework,-

- (i) the application for determination of tariff for any financial year shall be made not less than one hundred and twenty (120) days before the commencement of such financial year;
- (ii) 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:

## **10 Tariff Order**

10.1 The Commission shall, within one hundred and twenty (120) days from the receipt of a complete application and after considering all suggestions and objections received from the public:

- (a) issue a tariff Order accepting the application with such modifications or such conditions as may be contained in such Order; or
- (b) reject the application for reasons to be recorded in writing if such application is not in accordance with the provisions of the Act and the rules and regulations made thereunder or the provisions of any other law for the time being in force:

Provided that an applicant shall be given a reasonable opportunity of being heard before his application is rejected.

- 10.2 The applicant shall publish the tariff or tariffs approved by the Commission in at least two (2) English and two (2) Marathi language daily newspapers having circulation in the area of licence and shall put up the approved tariff / tariff schedule on its internet website and make available for sale, a booklet containing such tariff or tariffs, as the case may be, to any person upon payment of reasonable reproduction charges;

Provided that where the applicant is a Generating Company, the publication shall be in such newspapers as are widely circulated in the area of supply of the Distribution Licensee to whom the electricity is proposed to be supplied in terms of the tariff Order and shall also be put up on the internet website of such Distribution Licensee.

- 10.3 The tariff so published shall be in force from the date specified in the said Order and shall, unless amended or revoked, continue to be in force for such period as may be stipulated therein.

## **11 Adherence to Tariff Order**

- 11.1 No tariff or part of any tariff may be ordinarily 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 specified in Regulation 82.
- 11.2 The Commission, may, after satisfying itself for reasons to be recorded in writing allow for the revision of tariff.
- 11.3 If any Licensee or Generating Company recovers a price or charge exceeding the tariff determined under Section 62 of the Act and in accordance with these Regulations, the excess amount shall be recoverable by the person who has paid such price or charge along with interest equivalent to the bank rate of the Reserve Bank of India without prejudice to any other liability incurred by such Licensee or Generating Company.
- 11.4 The Licensee shall submit periodic returns as may be required by the Commission, containing operational and cost data to enable the Commission to monitor the implementation of its Order and reassess the basis on which tariff was approved.

## **PART C: MULTI-YEAR TARIFF**

### **12 Multi-year tariff framework**

- 12.1 The Commission shall determine the tariff for matters covered under clauses (i), (ii), (iv) and (v) of Regulation 3.1 above under a multi-year tariff framework with effect from April 1, 2006:

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.

- 12.2 The multi-year tariff framework shall be based on the following elements, for calculation of aggregate revenue requirement and expected revenue from tariff and charges:
- (i) control period, at the commencement of which a forecast of the aggregate revenue requirement and expected revenue from existing tariffs and charges shall be submitted by the applicant and approved by the Commission;
  - (ii) applicant's forecast of aggregate revenue requirement and expected revenue from tariffs and charges during the control period, based on reasonable assumptions relating to the expected behaviour of the underlying financial and operational variables;
  - (iii) trajectory for specific variables as may be stipulated by the Commission, 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 variations 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) annual determination of tariff for each financial year within the control period, based on the approved forecast and results of the annual performance review.

### **13 Applicability**

- 13.1 The multi-year tariff framework shall apply to applications made for determination of tariff for transmission, wheeling and retail sale of electricity in the State.
- 13.2 The Commission may specify a trajectory of the nature referred to in clause (iii) of Regulation 12.2 for determination of tariff of
- (i) a generating station,
  - (ii) a Generating Company; and/ or
  - (iii) a Licensee in respect of his Generation Business:

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

## **14 Control period**

- 14.1 The applicant shall submit a forecast of his aggregate revenue requirement and expected revenue from tariff and charges for the approval of the Commission for each financial year within a control period of five (5) financial years:

Provided that for the first application made to the Commission under this Part, the control period shall be three (3) financial years i.e. April 1, 2006 to March 31, 2009.

Provided further that 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 hearing the parties affected:

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

## **15 Forecast**

- 15.1 The applicant shall submit the forecast of aggregate revenue requirement and expected revenue from tariff for the control period in such manner, within such time limit and accompanied by such fee payable therefore as provided in **Part B** of these Regulations.

### **15.2 Forecast of aggregate revenue requirement**

- 15.2.1 The applicant shall develop the forecast of aggregate revenue requirement using any one of the following two methodologies:

- (a) Assumptions relating to the behavior of individual variables that comprise the aggregate revenue requirement 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 aggregate revenue requirement of the applicant is correlated; and
  - (ii) percentage annual reduction in aggregate revenue requirement 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 control period commencing from April 1, 2006 shall be accompanied by forecasts developed using the methodology specified in clause (a) above.

15.2.2 Where, for any control period, the applicant seeks to change the methodology for forecasting the aggregate revenue requirement, either:

- (a) from the methodology specified in clause (a) of Regulation 15.2.1 to clause (b) of that Regulation; or
- (b) from the methodology specified in clause (b) of Regulation 15.2.1 to clause (a) of that Regulation,

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

15.2.3 The Commission may, upon scrutiny of such application and after hearing the affected parties, either

- (a) pass an order approving the change of method, subject to such 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 these Regulations.

15.3 Forecast of expected revenue from tariff and charges

15.3.1 The applicant shall develop the forecast of expected revenue from tariff and charges based on the following:

- (a) In the case of a Transmission Licensee, estimates of transmission capacity allocated to Transmission System Users for each financial year within the control period;
- (b) In the case of a Distribution Licensee, estimates of quantum of electricity supplied to consumers and wheeled on behalf of Distribution System Users for each financial year within the control period;
- (c) Prevailing tariffs as at the date of making the application.

15.4 The applicant shall provide full details supporting the forecast, including but not limited to details of past performance, proposed initiatives for achieving efficiency or productivity gains, technical studies, contractual arrangements and/or secondary research, to enable the Commission to assess the reasonableness of the forecast.

15.5 Upon studying the application, the Commission shall either-

- (a) pass an order approving the forecast of aggregate revenue requirement 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 these Regulations and direct the applicant to submit a revised forecast taking into consideration such factors as the Commission may deem appropriate.

- 15.6 The Commission shall, in its Order passed under Regulation 15.5 above, specify the variables comprised in the aggregate revenue requirement and expected revenue from tariff and charges of the applicant that shall be reviewed by the Commission as part of the annual performance review in accordance with Regulation 17 below:

Provided that such variables shall be limited to the major items of cost and revenue forecast of the applicant that, in the Commission's opinion, could have a material impact on the cost of supply of electricity to consumers in the State over the control period:

Provided further that the variables, as may be stipulated by the Commission under Regulation 16 below, shall form part of the annual performance review, unless exempted by the Commission from such review in its Order.

## **16 Specific trajectory for certain variables**

- 16.1 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, station heat rate, transmission losses, distribution losses and collection efficiency.

- 16.2 Where the Commission has stipulated a trajectory for certain variables under this Regulation 16, the norms specified in **Part E, Part F, Part G or Part H** of these Regulations, as the case may be, shall not apply with regard to such variables for such period as the trajectory has been so stipulated.

- 16.3 The trajectory stipulated by the Commission in accordance with this Regulation 16 shall be incorporated by the applicant in his forecast of aggregate revenue requirement and/ or expected revenue from tariff and charges under Regulation 15.

## **17 Annual review of performance**

- 17.1 Where the aggregate revenue requirement 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.

- 17.2 The Licensee or Generating Company shall make an application for annual performance review within the time limit specified in Regulation 9:

Provided that the Licensee or Generating Company, 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 aggregate revenue requirement and expected revenue from tariff and charges:

Provided further that the application for annual performance review shall be submitted to and dealt with by the Commission in the manner provided in **Part B**

of these Regulations for submission of and dealing with an application for determination of tariff and within the time limit specified in the said Part for such application.

17.3 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 aggregate revenue requirement and expected revenue from tariff and charges and shall comprise the following:

- (a) a comparison of the audited performance of the applicant for the previous financial year with the approved forecast for such previous financial year; and
- (b) a comparison of the performance of the applicant for the first half of the current financial year with the approved forecast for the current financial year.

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

17.5 For the variables stipulated by the Commission under Regulation 15.6, the Commission shall carry out a detailed review of performance of the applicant vis-à-vis the approved forecast, as part of the annual performance review.

17.6 Upon completion of the review under Regulation 17.5 above, the Commission shall attribute any variations or expected variations in performance, for variables stipulated under Regulation 15.6 above, to factors within the control of the applicant (controllable factors) or to factors beyond the control of the applicant (uncontrollable factors):

Provided that any variations or expected variations in performance, for variables other than those stipulated under Regulation 15.6 above, shall not be reviewed by the Commission during the control period and shall be attributed entirely to controllable factors:

Provided however that where the applicant or any interested or affected party believes, for any variable not stipulated under Regulation 15.6 above, that there is a material variation or expected variation in performance, for any financial year, on account of uncontrollable factors, such applicant or interested or affected party may apply to the Commission for inclusion of such variable, at the Commission's discretion, in the review under Regulation 17.5 above for such financial year.

Explanation – for the purpose of these Regulations, the term “uncontrollable factors” shall include the following factors which were beyond the control of, and could not be mitigated by, the applicant, as determined by the Commission-

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

17.6.1 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 due to the circumstances specified in Regulation 25;
- (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;

17.6.2 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;
- (c) Variations in the number or mix of consumers or quantities of electricity supplied to consumers as specified in the first and second proviso to clause (b) of Regulation 17.6.1;
- (d) Variations in working capital requirements;
- (e) Failure to meet the standards specified in the Standards of Performance Regulations, except where exempted in accordance with those Regulations;
- (f) Variations in labour productivity;
- (g) Variations in any variable other than those stipulated by the Commission under Regulation 15.6 above, except where reviewed by the Commission under the second proviso to this Regulation 17.6.

17.7 A Generating Company or Licensee may, as a result of additional information not previously known or available to him at the time the forecast under Regulation 15 was developed, apply for a modification in the approved forecast of aggregate revenue requirement 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 be allowed a modification of the approved forecast under this Regulation not more than once in each control period.

- 17.8 The Commission may, as a result of additional information not previously known or available to the Commission at the time the forecast under Regulation 15 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 aggregate revenue requirement 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 Regulation once in each control period.

- 17.9 The Commission shall review an application made to it under Regulation 17.7 and Regulation 17.8 above in the same manner as the original application for determination of tariff 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.

- 17.10 Upon completion of the annual performance review, the Commission shall pass an order recording-

- (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 18;
- (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 19;
- (c) the approved modifications to the forecast of the Generating Company or Licensee for the remainder of the control period, if any, under Regulation 17.9 above.

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

- 18.1 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 17.10:

- 18.2 Nothing contained in this Regulation 18 shall apply in respect of any gain or loss arising out of variations in the price of fuel, which shall be dealt with as specified in Regulation 82.

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

- 19.1 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 17.10;
  - (b) In case of a Licensee, 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 19.2; and
  - (c) The balance amount of gain may be utilized at the discretion of the Generating Company or Licensee.
- 19.2 The approved aggregate loss to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:
- (a) One-third of the amount of such loss may be passed on as an additional charge in tariffs over such period as may be specified in the Order of the Commission under Regulation 17.10; and
  - (b) The balance amount of loss shall be absorbed by the Generating Company or Licensee.

**20 Annual determination of tariff**

- 20.1 The Commission shall determine the tariff of a Generating Company or 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 aggregate revenue requirement and expected revenue from tariff and charges for such financial year, including approved modifications to such forecast; and
  - (b) Approved gains and losses to be passed through in tariffs, following the annual performance review.

## **PART D: ELECTRICITY PURCHASE AND PROCUREMENT**

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### **21 Applicability**

- 21.1 The regulations contained in this Part shall apply to electricity purchase and procurement by a Distribution Licensee from a Generating Company or Licensee or from any other source through agreement or arrangement for purchase of power for distribution and supply within the State.

### **22 Power procurement guidelines**

- 22.1 A Distribution Licensee shall follow the guidelines contained in this Part with respect to:
- (a) Procurement of power under any arrangement or agreement with a term or duration exceeding one year (i.e. long-term power procurement); and
  - (b) Procurement of power under any arrangement or agreement with a term or duration less than or equal to one year (i.e. short-term power procurement).

### **23 Long-term power procurement plan**

- 23.1 The Distribution Licensee shall prepare a five-year plan for procurement of power to serve the demand for electricity in his area of supply and submit such plan to the Commission for approval:

Provided that such long-term power procurement plan shall be an annual rolling plan and the first plan period shall commence on April 1, 2006:

Provided further that the long-term power procurement plan shall be submitted along with the application for determination of tariff, in accordance with Part B of these Regulations.

- 23.2 The long-term power procurement plan of the Distribution Licensee shall comprise the following:
- (a) A quantitative forecast of the unrestricted demand for electricity, within his area of supply, from each tariff category over the plan period;
  - (b) An estimate of the quantities of electricity supply from the approved sources of generation and power purchase;
  - (c) Standards to be maintained with regard to quality and reliability of supply, in accordance with the Standards of Performance Regulations;
  - (d) Measures proposed to be implemented as regards energy conservation and energy efficiency;
  - (e) The requirement for new sources of power generation and/ or procurement, including augmentation of generation capacity and identified new sources of supply, based on (a) to (d) above;
  - (f) The plan for procurement of power including quantities and cost estimates for such procurement:

Provided that the forecast/ estimate contained in the long-term procurement plan shall be separately stated for peak and off-peak periods, in terms of quantities of power procured (in millions of units of electricity) and maximum demand (in MW / MVA):

Provided further that the forecasts/ estimates shall be prepared for each three-month period over the plan period:

Provided also that the long-term procurement plan shall be a cost-effective plan based on available information regarding costs of various sources of supply.

Explanation – for the purpose of this Regulation, the term “peak period” shall mean such block of three (3) continuous hours during a twenty-four (24) hour period representing maximum demand for power by the Distribution Licensee.

- 23.3 The forecasts/ estimates shall be prepared using forecasting techniques based on past data and reasonable assumptions regarding the future:

Provided that the forecasts/ estimates shall take into account factors such as overall economic growth, consumption growth of electricity-intensive sectors, advent of competition in the electricity industry, trends in captive power, impact of loss reduction initiatives, improvement in generating station Plant Load Factors and other relevant factors.

- 23.4 The forecasts/ estimates submitted to the Commission as part of the long-term power procurement plan shall be consistent with the forecasts of power generation, power purchase and demand for electricity prepared and submitted under Regulation 15.

- 23.5 Where the Commission has stipulated a percentage of the total consumption of electricity in the area of a Distribution Licensee to be purchased from cogeneration and renewable sources of energy, the long-term power procurement plan of such Distribution Licensee shall include the plan for procurement from such sources at least upto the stipulated level.

- 23.6 The Commission shall forward a copy of the long-term power procurement plan submitted by the Distribution Licensee to the State Transmission Utility for verification of its consistency with the transmission system plan for the intra-state transmission system, prepared in accordance with the Transmission Open Access Regulations:

Provided that the Distribution Licensee may separately consult the State Transmission Utility at the time of preparation of the long-term power procurement plan to ensure consistency of such plan with the transmission system plan.

- 23.7 The Distribution Licensee may, as a result of additional information not previously known or available to him at the time of submission of the long-term procurement plan under Regulation 23.1, apply for a modification in the long-term procurement plan, for the remainder of the control period, as part of the annual performance review under Regulation 17:

Provided that the Distribution Licensee may be allowed a modification of the long-term power procurement plan under this Regulation not more than once in each control period.

- 23.8 The Commission may, as a result of additional information not previously known or available to the Commission at the time of submission of the long-term procurement plan under Regulation 23.1, if it so deems, either suo motu or on an application made by any interested or affected party, modify the long-term procurement plan of the Distribution Licensee, for the remainder of the control period, as part of the annual performance review.

Provided that the Commission may modify the long-term power procurement plan under this Regulation not more than once in each control period.

- 23.9 The Commission shall review the long-term power procurement plan of the Distribution Licensee, or any proposed modification thereto, and upon such review being completed, the Commission shall either-

- (a) pass an order approving the long-term power procurement plan, or modifications thereto, subject to such modifications and conditions as it may deem appropriate; or
- (b) reject the long-term power procurement plan or application for modification thereto, for reasons recorded in writing, if such plan is not in accordance with the guidelines contained in this Part and directing the Distribution Licensee to submit a revised plan based on such considerations as it may specify:

Provided that the Distribution Licensee shall be given reasonable opportunity of being heard before his long-term power procurement plan is rejected.

## **24 Approval of power purchase agreement / arrangement**

- 24.1 Every agreement or arrangement for long-term power procurement by a Distribution Licensee from a Generating Company or Licensee or from other source of supply entered into after the date of notification of these Regulations shall come into effect only with the prior approval of the Commission:

Provided that the prior approval of the Commission shall be required in accordance with this Regulation 24 in respect of any agreement or arrangement for procurement of electricity by the Distribution Licensee from a Generating Company or Licensee or from any other source of supply on a standby basis:

Provided further that the prior approval of the Commission shall also be required in accordance with this Regulation 24 for any change to an existing arrangement or agreement for long-term power procurement, whether or not such existing arrangement or agreement was approved by the Commission.

- 24.2 The Commission shall review an application for approval of power purchase agreement/ arrangement having regard to the approved long-term power procurement plan of the Distribution Licensee and the following factors:

- (a) Requirement for power procurement under the approved long-term power procurement plan;

- (b) Adherence to a transparent process of bidding in accordance with guidelines issued by the Central Government;
- (c) Adherence to the terms and conditions for determination of tariff specified under Part E of these Regulations where the process specified in (b) above has not been adopted;
- (d) Availability (or expected availability) of capacity in the intra-State transmission system for evacuation and supply of power procured under the agreement/ arrangement;
- (e) Need to promote cogeneration and generation of electricity from renewable sources of energy.

24.3 Where the terms and conditions specified under Part E of these Regulations are proposed to be adopted, the approval of the power purchase agreement between a Generating Company and a Distribution Licensee for supply of electricity from a new generating station may comprise of two steps, at the discretion of the applicant:

- (a) Approval of a provisional tariff, on the basis of an application made to the Commission at any time prior to the application made under clause (b) below; and
- (b) Approval of the final tariff, on the basis of an application made not later than three (3) months from the cut-off date.

## **25 Short-term power procurement**

25.1 The Distribution Licensee shall undertake his power procurement during the year in accordance with the power procurement plan for such year approved by the Commission in accordance with Regulation 76.5 below.

25.2 Subject to the exceptions contained in this Regulation 25, any variation, during any quarter of a financial year, in the quantum or cost of power procured and any procurement from a source other than a previously approved source, in excess of five (5) per cent of the quantum or cost, as the case may be, of power procurement for such quarter, as approved by the Commission in the power procurement plan of the Distribution Licensee, shall be only with the prior approval of the Commission.

Provided that a variation in the cost of power procured on account of changes in the price of fuel, calculated in accordance with Regulation 82, shall not be included in determining the need for prior approval of the Commission under this Regulation 25.2.

25.3 Where there has been a shortfall or failure in the supply of electricity from any approved source of supply during the financial year, the Distribution Licensee may enter into a short-term arrangement or agreement for procurement of power without the prior approval of the Commission where the tariff for power procured under such arrangement or agreement is determined in accordance with –.

- (a) a transparent process of bidding in accordance with guidelines issued by the Central Government; or
- (b) the terms and conditions contained in **Part E** of these Regulations.

- 25.4 Notwithstanding anything contained in Regulation 25.2, where the Commission has notified that a shortage of supply of electricity exists and has fixed a minimum and maximum ceiling of tariff for sale or purchase of electricity, in pursuance of an agreement, entered into between a Generating Company and a Licensee or between Licensees, for a period not exceeding one year, the Distribution Licensee may procure power within such minimum and maximum ceiling of tariff without the prior approval of the Commission.
- 25.5 Where the Distribution Licensee seeks to procure power in excess of the quantum approved by the Commission in his approved power procurement plan under Regulation 76.5 and expects to sell such additional power at a tariff higher than the cost of supply to the consumer, the Distribution Licensee may enter into a short-term arrangement or agreement for procuring such additional power without the approval of the Commission.
- 25.6 Where the Distribution Licensee has identified a new short-term source of supply from which power can be procured at a tariff that reduces his approved total power procurement cost, the Distribution Licensee may enter into a short-term power procurement agreement or arrangement with such supplier without the prior approval of the Commission.
- 25.7 The Distribution Licensee may enter into a short-term arrangement or agreement for procurement of power without the prior approval of the Commission when faced with emergency conditions that threaten the stability of the distribution system or when directed to do so by the State Load Despatch Centre to prevent grid failure.
- 25.8 Within fifteen (15) days from the date of entering into an agreement or arrangement for short-term power procurement for which prior approval is not required, the Distribution Licensee shall provide the Commission, full details of such agreement or arrangement, including quantum, tariff calculations, duration, supplier details, method for supplier selection and such other details as the Commission may require with regard to such agreement/ arrangement to assess that the conditions specified in this Regulation 25 have been complied with:
- Provided that where the Commission has reasonable grounds to believe that the arrangement or agreement entered into by the Distribution Licensee does not meet the criteria specified in Regulation 25.3 to Regulation 25.7 above, the Commission may disallow any increase in the total cost of power procurement (net of additional revenue) over the approved level arising therefrom or any loss incurred by the Distribution Licensee as a result, from being passed through to consumers as an adjustment in tariffs.
- 25.9 Subject to the cases specified in Regulation 25.3 to Regulation 25.7 above, where the Distribution Licensee enters into any agreement or arrangement for short-term power procurement without the approval of the Commission, any increase in the total cost of power procurement (net of additional revenue) over the approved level arising therefrom shall be deemed to be a variation in performance attributable entirely to controllable factors.

## **PART E: GENERATION**

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### **26 Applicability**

26.1 The regulations specified in this Part E shall apply in determining the tariff for supply of electricity to a Distribution Licensee from conventional sources of generation:

Provided that determination of tariff for supply of electricity to a Distribution Licensee from non-conventional sources of generation shall be in accordance with such terms and conditions as stipulated in relevant Orders of the Commission.

26.2 The Commission shall be guided by the terms and conditions contained in this Part in determining the tariff for supply of electricity by a Generating Company to a Distribution Licensee in the following cases:

- (a) where such tariff is pursuant to a power purchase agreement or arrangement entered into subsequent to the date of notification of these Regulations; or
- (b) where such tariff is pursuant to a power purchase agreement or arrangement entered into prior to the date of notification of these Regulations and the Commission has not previously approved of such agreement/ arrangement or adopted the tariff contained therein; or
- (c) where such tariff is pursuant to a power purchase agreement or arrangement which is the subject of a review by the Commission under Regulation 0 above; or
- (d) where the Distribution Licensee is engaged in the business of generation of electricity, in determining the transfer price at which electricity is supplied by the Generation Business of the Distribution Licensee to his Retail Supply Business:

Provided that the Commission may deviate from the norms contained in this Part or specify alternative norms for particular cases, where it so deems appropriate, having regard to the circumstances of the case:

Provided that the reasons for such deviation shall be recorded in writing:

Provided further that in case of an existing generation station, the Commission shall determine the tariffs having regard to the historical performance of such generating station and reasonable opportunities for improvement in performance, if any.

26.3 Notwithstanding anything contained in this **Part E**, the Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government.

## **27 Tariff determination**

- 27.1 Tariff in respect of a generating station under these Regulations shall be determined stage-wise, unit-wise or for the whole generating station. The terms and conditions for determination of tariff for generating stations specified in this Part shall apply in like manner to stages or units, as the case may be, as to generating stations.
- 27.2 Where the tariff is being determined for stage or unit of a generating station, the Generating Company shall adopt a reasonable basis for allocation of capital cost relating to common facilities and allocation of joint and common costs across all stages or units, as the case may be:
- Provided that the Generating Company shall maintain an Allocation Statement providing the basis for allocation of such costs and submit such statement to the Commission along with the application for determination of tariff under Part B of these Regulations.
- 27.3 In relation to multi-purpose hydroelectric projects, with irrigation, flood control and power components, the capital cost chargeable to the power component of the project only shall be considered for determination of tariff.

## **28 Components of tariff**

- 28.1 Tariff for sale of electricity from a thermal power generating station shall comprise of two parts, namely, the recovery of annual fixed charges and energy charges.
- 28.2 Tariff for sale of electricity from a hydro power generating station shall comprise of two-parts, namely, recovery of annual capacity charge and energy charges.
- Provided that the annual capacity charges for a hydro power generating station shall be computed in accordance with the following formula:
- $$\text{Annual Capacity Charges} = (\text{Annual Fixed Charge} - \text{Energy Charge})$$
- Provided further that the Energy Charge shall not exceed the Annual Fixed Charge under these Regulations.
- 28.3 The annual fixed charges of a thermal generating station or of a hydro power generating station, as the case may be, shall consist of recovery of the following
- (a) Return on equity capital;
  - (b) Income-tax;
  - (c) Interest on loan capital;
  - (d) Depreciation, including Advance Against Depreciation, and amortization of intangible assets;
  - (e) Operation and maintenance expenses; and
  - (f) Interest on working capital.

28.4 The energy charges, in case of thermal generating station, shall cover fuel cost and shall be computed as specified in Regulation 35.1

28.5 The energy charges, in case of hydro generating station, shall be computed as specified in Regulation 35.2

## **29 Multi-year tariffs**

29.1 The Commission may specify a trajectory under Regulation 16 for certain norms of operation for a generating station, for a Generating Company and/or for a Licensee in respect of his Generation Business:

Provided that the Commission shall have regard to the provisions of any power purchase agreement or arrangement in specifying such trajectory:

Provided further that where the Commission has stipulated a trajectory under Regulation 16, then the norms specified under this Part shall not apply for such variables as may be covered under such trajectory for the period covered by such trajectory.

## **30 Capital cost**

30.1 Subject to prudence check by the Commission, the actual expenditure incurred on completion of the project shall form the basis for determination of the original cost of project. The original cost of project shall be determined based on the approved capital expenditure actually incurred up to the date of commissioning of the generating station and shall include capitalised initial spares subject to following ceiling norms as a percentage of the original cost as on the cut-off date:

- |   |   |      |
|---|---|------|
| (i) Coal-based/lignite-fired generating stations    | - | 2.5% |
| (ii) Gas Turbine/Combined Cycle generating stations | - | 4.0% |
| (iii) Hydro power generating stations               | - | 1.5% |

Provided that where the power purchase agreement entered into between the Generating Company and the Distribution Licensee provides a ceiling of actual expenditure, the original cost of project shall not exceed such ceiling for the purpose of these Regulations:

Provided further that in case of the existing generating stations, the actual original cost of project recorded in the books of account of the Generating Company, subject to prudence check by the Commission, shall be considered as the original cost of project for the purpose of these Regulations.

30.2 Additional Capitalisation: The following capital expenditure within the original scope of work actually incurred after the date of commissioning and up to the cut off date may be allowed by the Commission for inclusion in the original cost of project, subject to prudence check:

- (i) Deferred liabilities;
- (ii) Works deferred for execution;

- (iii) Procurement of initial capital spares in the original scope of work, subject to ceiling specified in Regulation 30.1;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) On account of change in law.

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

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

30.3 The capital expenditure of the following nature actually incurred after the cut-off date may be allowed by the Commission for inclusion in the original cost of project, subject to prudence check:

- (i) Deferred liabilities relating to works/services within the original scope of work;
- (ii) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;
- (iii) On account of change in law;
- (iv) Any additional works/services which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost; and
- (v) Deferred works relating to ash pond or ash handling system in the original scope of work.

30.4 Any expenditure on other items/assets, not being generating assets, including, but not limited to, normal tools and tackles, personal computers, furniture, air-conditioners, voltage stabilizers, refrigerators, fans, coolers, TV, washing machines, heat-convectors, etc. bought after the cut-off date may be capitalised, with the prior approval of the Commission:

Provided that the approval of the Commission under this Regulation 30.4 shall not be required where the aggregate expenditure on such assets in any financial year does not exceed Rupees Ten (10) crores.

30.5 Impact of additional capitalisation in tariff revision may be considered by the Commission twice in a tariff period, including revision of tariff after the cut-off date.

30.6 Any expenditure on replacement, renovation and modernization or extension of life of old fixed assets shall be considered after writing off the gross value of any such replaced assets from the original capital cost:

Explanation – for the purpose of these Regulations, the term renovation and modernization shall have the same meaning as in Section 80 IA of the Income-tax Act, 1961.

30.7 The provisions of the Statements of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India shall apply, to the extent not inconsistent with these Regulations, in determining the original cost of the project.

30.8 The impact of any foreign exchange rate variation on a foreign currency loan taken to finance a project shall be treated in accordance with the Statements of Accounting Standard (AS 11): Accounting for the Effects of Changes in Foreign Exchange Rates of the Institute of Chartered Accountants of India:

Provided that the actual or normative loan capital determined as per Regulation 31 and Regulation 32 of these Regulations shall be considered for inclusion in the above.

30.9 The approved capital expenditure of the project shall be considered as the original cost of such project for the purpose of these Regulations.

30.10 The amount of capital expenditure shall be assumed to have been incurred evenly during the year for the purpose of these Regulations.

### **31 Debt-equity ratio**

#### **31.1 Existing generating stations**

31.1.1 For the purpose of these Regulations, the amount of loan capital and equity capital shall be calculated as follows:

- (a) The amount of loan capital shall be equal to the sum of the outstanding balance of all long-term loans taken to finance the purchase or construction of the generating station, at the commencement of the financial year for which tariff is being determined, as reflected in the books of account of the Generating Company;
- (b) The amount of equity capital shall be equal to-
  - (i) equity capital as at April 1, 2004 as determined by the Commission in accordance with the Explanation below; plus
  - (ii) equity component of approved capital expenditure for the financial year ending March 31, 2005:

Provided that in case of a Generating Company formed as a result of a transfer scheme under Section 131 of the Act, the date of the said transfer scheme shall be the effective date instead of April 1, 2004 for determination of equity capital under clause (b) above.

Explanation – for the purpose of this Regulation, equity capital shall be the sum total of paid-up equity capital, preference share capital, fully / compulsorily convertible debentures (or other financial instruments with equivalent characteristics), foreign currency convertible bonds, share premium account and any reserves, available for distribution as dividend or for capitalization by way of issue of bonus shares, which have been invested in the Generation Business. The amount of any grant, revaluation reserve, development reserve, contingency reserve and contributions from customers shall not be included in the equity capital. The amount reflected in the books of account as deferred tax liability or deferred tax asset of the Generation Business shall be added or deducted, as the case may be, from the amount of equity capital.

31.2 New generating stations

31.2.1 Any generating station commissioned on or after the date of notification of these Regulations shall be assumed to be financed at a normative debt:equity ratio of 70:30.

31.2.2 A Generating Company that has achieved financial closure in respect of a new generating station prior to the date of notification of these Regulations with a debt:equity ratio less than 70:30 may apply to the Commission for exemption from Regulation 31.2.1 along with reasons therefor:

Provided that the Commission may exempt such generating station from the normative debt:equity ratio if it believes that the application of Regulation 31.2.1 is likely to adversely affect the commissioning schedule of such generating station and thereby, the cost and/ or quantity of electricity supplied to consumers.

31.3 Renovation, modernization and replacement

31.3.1 Any approved capital expenditure incurred on renovation, modernization, replacement or extension of life of existing generating assets on or after April 1, 2005 shall be assumed to be financed at a normative debt:equity ratio of 70:30:

31.4 Other fixed assets

31.4.1 Any approved capital expenditure incurred on purchase of other fixed assets (not being generating assets) on or after April 1, 2005 shall be assumed to be financed at a normative debt:equity ratio of 70:30.

31.5 The Commission may, if it deems appropriate, allow a relaxation in the debt:equity ratio norm specified in this Regulation 31 where the applicant reasonably demonstrates inability to raise loan capital, up to the specified norm, due to market constraints, corporate / group exposure norms of lenders or similar factors:

Provided that the Commission shall give any interested or affected party the opportunity to make representations before approving a relaxation in the debt:equity ratio norm under this Regulation 31.5.

## **32 Loan repayment schedule**

32.1 The repayment schedule for the loan capital of existing generating stations calculated under Regulation 31.1 above shall be in accordance with the loan agreements.

32.2 The loan capital calculated using the normative debt:equity ratio under Regulation 31.2, Regulation 31.3 and Regulation 31.4 above shall be assumed to be repaid each year based on a normative repayment schedule:

Provided that the amount of such normative repayment for a year shall be equal to the amount of depreciation on the fixed asset to which such loan relates:

Provided further that where the outstanding normative loan balance is less than the amount of normative loan repayment calculated as above, the repayment shall be assumed to be equal to the outstanding normative loan balance and no further amount shall be permitted on account of such loan:

Provided also that all normative repayments are assumed to be made on September 30<sup>th</sup> of each financial year.

32.3 Where, in respect of a generating station, the actual amount of loan repayment in any financial year exceeds the amount of depreciation allowable under Regulation 34.4.1, the Generating Company shall be allowed an advance against depreciation for the difference between the actual amount of such repayment and the allowable depreciation in respect of such generating station, for such financial year:

Provided also that such advance against depreciation shall be restricted to 1/10<sup>th</sup> of the principal amount of loans minus the amount of depreciation allowable under Regulation 34.4.1:

Provided also that the amount of loan repayment, calculated in accordance with Regulation 32.1 and Regulation 32.2 above shall be assumed to be increased by the amount of such advance against depreciation availed by the Generating Company:

Provided also that upon repayment of the entire loan amount, the original cost of the fixed asset shall be reduced by the aggregate of accumulated depreciation and advance against depreciation availed by the Generating Company and the resulting depreciable value shall be spread over the balance useful life of the fixed asset.

## **33 Norms for operation**

33.1 Thermal generating stations

33.1.1 Availability

(a) Target availability for full recovery of annual fixed charges shall be 80 per cent

(c) Target Plant Load Factor for incentive in accordance with Regulation 37 shall be 80 per cent

### 33.1.2 Auxiliary Energy Consumption

#### (a) Coal-based generating stations

	With cooling tower	Without cooling tower
(i) 200 MW series	9.0%	8.5%
(ii) 500 MW series		
Steam driven boiler feed pumps	7.5%	7.0%
Electrically driven boiler feed pumps	9.0%	8.5%

#### (b) Gas Turbine/Combined Cycle generating stations

(i) Combined cycle : 3.0%

(ii) Open cycle : 1.0%

#### (c) Lignite-fired thermal power generating stations

The auxiliary energy consumption norms shall be 0.5 percentage point more than the auxiliary energy consumption norms of coal-based generating stations specified in clause (a) of Regulation 33.1.2 above.

**Note:**

During stabilization period, normative auxiliary consumption shall be reckoned at 0.5 percentage point more than the norms indicated at (a), (b) and (c) above.

### 33.1.3 Gross station heat rate

#### (a) Gross station heat rate for coal-based generating stations

	200/210/250 MW sets	500 MW and above sets
During stabilization period	2600 kCal/kWh	2550 kCal/kWh
Subsequent period	2500 kCal/kWh	2450 kCal/kWh

**Note 1:**

In respect of 500 MW and above units where the boiler feed pumps are electrically operated, the gross station heat rate shall be 40 kCal/kWh lower than the station heat rate indicated above.

**Note 2:**

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

- (b) For lignite-fired generating stations, the gross station heat rates specified under clause (a) above for coal-based generating stations shall be corrected using multiplying factors as given below:
- (i) For lignite having 50% moisture: Multiplying factor of 1.10
  - (ii) For lignite having 40% moisture: Multiplying factor of 1.07
  - (iii) For lignite having 30% moisture: Multiplying factor of 1.04
  - (iv) For other values of moisture content, multiplying factor shall be prorated for moisture content between 30-40 and 40-50 depending upon the rated values of multiplying factor for the respective range given under sub-clauses (i) to (iii) above.
- (c) Gross station heat rate for gas turbine/combined cycle generating stations

	Advanced Class Machines	E/EA/EC/E2 Class Machines
Open cycle	2685 kCal/kWh	2830 kCal/kWh
Combined cycle	1850 kCal/kWh	1950 kCal/kWh

- (d) Gross station heat rate for small gas turbine generating stations

	Advanced Class Machines	E/EA/EC/E2 Class Machines
Open cycle	3125 kCal/kWh	1.02x3125 kCal/kWh
Combined cycle	2030 kCal/kWh	1.02x2030 kCal/kWh

#### 33.1.4 Secondary fuel oil consumption

- (a) Coal-based generating stations:

During stabilization period	Subsequent period
4.5 ml/kWh	2.0 ml/kWh

- (b) Lignite-fired generating stations:

During stabilization period	Subsequent period
5.0 ml/kWh	2.5 ml/kWh

### 33.1.5 Stabilisation period

Stabilization period shall be reckoned from the date of commissioning as follows, namely:

- (a) Coal-based and lignite-fired generating stations - 180 days
- (b) Gas turbine/combined cycle generating stations - 90 days

### 33.1.6 Transit losses

(a) Transit losses for coal based generating stations, as a percentage of quantity of coal dispatched by the coal supply company during the month, shall be as given below:

- (i) Pit head generating stations - 0.3%
- (ii) Non-pit head generating stations - 0.8%

## 33.2 Hydro power generating stations

### 33.2.1 Normative capacity index for recovery of annual fixed charges

- (a) During first year after commissioning 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 after commissioning of the generating station
  - (i) Purely Run-of-river power stations - 90%
  - (ii) Storage type and Run-of-river power stations with pondage - 85%

#### **Note:**

There shall be pro rata recovery of annual fixed charges in case the generating station achieves capacity index below the prescribed normative levels. At Zero capacity index, no fixed charges shall be payable to the generating station.

### 33.2.2 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

### 33.3 Transformation losses (hydro power generating stations)

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

## **34 Calculation of annual fixed charges**

### 34.1 Return on Equity

Return on equity capital shall be computed on the equity capital determined in accordance with Regulation 31 at the rate of 14 per cent per annum in Indian Rupee terms.

### 34.2 Income-tax

#### 34.2.1 Income-tax on the income of the Generating Business of the Generating Company shall be allowed for inclusion in the annual fixed charges:

Provided that any change in such income-tax liability on account of assessment under the Income-tax Act, 1961, as certified by the statutory auditors, shall be allowed to be adjusted each year in the annual fixed charges:

Provided further that any change in such income-tax liability on account of change in income of the Generating Business of the Generating Company from the approved forecast shall be attributed to the same controllable or uncontrollable factors as have resulted in the change in income and shall be dealt with accordingly:

Provided further that the generating station-wise profit before tax as estimated for a financial year in advance shall constitute the basis for the distribution of the corporate tax liability to all generating stations of a Generating Company:

#### 34.2.2 The benefits of any income-tax holiday, credit for unabsorbed losses or unabsorbed depreciation shall be taken into account in calculation of the income-tax liability of the generating station of the Generating Company:

Provided that where such benefits cannot be directly attributed to a generating station, they shall be allocated across the generating stations of a Generating Company in the proportion of the generating station-wise profit before tax.

### 34.3 Interest on loan capital

#### 34.3.1 Interest on approved loan capital for existing generating stations calculated under Regulation 31.1 above shall be allowed, based on the approved interest rate and the repayment schedules of such loans:

#### 34.3.2 Interest on normative loan capital, calculated under Regulation 31.2, Regulation 31.3 and Regulation 31.4 above shall be allowed, based on the approved interest rate and the normative repayment schedule in accordance with Regulation 32 above:

#### 34.3.3 The provisions of the Statements of Accounting Standard (AS 16): Borrowing Costs of the Institute of Chartered Accountants of India shall apply, to the extent not inconsistent with the provisions of these Regulations, in determination of the interest on loan capital.

34.3.4 The Commission shall allow taxes on interest, commitment charges, finance charges and any exchange rate difference arising from foreign currency borrowings, to the extent recognized as interest cost in the books of account of the Generating Company.

34.4 Depreciation, including Advance Against Depreciation

34.4.1 Depreciation

For the purpose of tariff, depreciation shall be computed in the following manner, namely:

- (i) The value base for the purpose of depreciation shall be the original cost of the asset as approved by the Commission in accordance with Regulation 30;
- (ii) Depreciation shall be calculated annually, based on straight line method at the rates provided in the **Annexure - I** to the Regulation:

Provided that the residual life of the asset shall be considered as 10 per cent and depreciation shall be allowed up to maximum of 90 per cent of the original cost of the asset:

Provided further that land is not a depreciable asset and its cost shall be excluded from the original cost for the purpose of calculation of depreciation:

Provided also that the provisions of the Statements of Accounting Standards (AS6): Depreciation Accounting of the Institute of Chartered Accountants of India shall apply to the extent not inconsistent with these Regulations.

34.4.2 Advance Against Depreciation

In addition to depreciation, the Generating Company shall be entitled to Advance Against Depreciation, calculated in the manner given in Regulation 32.3 above.

34.4.3 The Generating Company shall be permitted to recover amortisation of intangible assets upto such level as may be approved by the Commission.

Explanation – for the purpose of this Regulation, the term “intangible assets” shall mean such pre-operative and promotional expenditure incurred in cash and shown as a debit in the capital account of the Generating Company as has fairly arisen in promoting the Generation Business and shall exclude any amount paid or otherwise accounted as goodwill.

34.5 Interest on Working Capital

- (a) In case of Coal based/ oil-based/ lignite-fired generating stations, working capital shall cover:
  - (i) Cost of coal or lignite for one and a half months for pit-head generating stations and two months for non-pit-head generating stations, corresponding to target availability;
  - (ii) Cost of oil for two months corresponding to target availability;

- (iii) Cost of secondary fuel oil for two months corresponding to target availability;
  - (iv) Operation and Maintenance expenses for one month;
  - (v) Maintenance spares @ 1 per cent of the historical cost; and
  - (vi) Receivables for sale of electricity equivalent to two months of the sum of annual fixed charges and energy charges calculated on target availability; minus
  - (vii) Payables for fuel (including oil and secondary fuel oil) to the extent of one month of the cost of fuel calculated on target availability.
- (b) In case of Gas Turbine/Combined Cycle generating stations, working capital shall cover:
- (i) Fuel cost for one month corresponding to target availability duly taking into account the mode of operation of the generating station on gas fuel and / or liquid fuel;
  - (ii) Liquid fuel stock for fifteen (15) days corresponding to target availability;
  - (iii) Operation and maintenance expenses for one month;
  - (iv) Maintenance spares at 1 per cent of the historical cost; and
  - (v) Receivables for sale of electricity equivalent to two months of the sum of annual fixed charges and energy charges calculated on target availability, minus
  - (vi) Payables for fuel (including liquid fuel stock) to the extent of one month of the cost of fuel calculated on target availability.
- (c) In case of hydro power generating stations, working capital shall cover:
- (i) Operation and maintenance expenses for one month;
  - (ii) Maintenance spares at 1 per cent of the historical cost; and
  - (iii) Receivables for sale of electricity equivalent to two months of the annual fixed charges calculated on normative capacity index.
- (d) In case of own generating stations, no amount shall be allowed towards receivables, to the extent of supply of power by the Generation Business to the Retail Supply Business, in the computation of working capital in accordance with these Regulations.
- (e) Rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on the date on which the application for determination of tariff is made.

## 34.6 Operation and Maintenance Expenses

### 34.6.1 Existing generating stations

- (a) The operation and maintenance expenses including insurance shall be derived on the basis of the average of the actual operation and maintenance expenses for the five (5) years ending March 31, 2004, based on the audited financial statements, excluding abnormal operation and maintenance expenses, if any, subject to prudence check by the Commission.
- (b) The average of such operation and maintenance expenses shall be considered as operation and maintenance expenses for the financial year ended March 31, 2002 and shall be escalated at the rate of 4 per cent per annum to arrive at operation and maintenance expenses for the base year commencing April 1, 2005.
- (c) The base operation and maintenance expenses for each subsequent year shall be escalated at the rate of 4 per cent per annum to arrive at permissible operation and maintenance expenses for such financial year.

Provided that in case, an existing generating station has been in operation for less than five (5) years as at April 1, 2004, the average shall be computed for such shorter period for which such generating station was in operation and such average shall be treated as the operating and maintenance expense for the base year commencing April 1, 2004. The operation and maintenance expenses for any subsequent financial year shall be computed in accordance with clause (c) above.

### 34.6.2 New generating stations

- (a) Thermal generating stations
  - (i) Coal-based generating stations

200/210/250 MW sets	:	Rs. 10.82 lakh/MW
500 MW and above sets	:	Rs. 9.73 lakh/MW

**Note:**

For the generating stations having combination of 200/210/250 MW sets and 500 MW and above set, the weighted average value for operation and maintenance expenses shall be adopted.
  - (ii) Gas Turbine/Combined Cycle generating stations other than small gas turbine power generating stations

With warranty spares of 10 years	:	Rs. 5.41 lakh/MW
Without warranty spares	:	Rs. 8.11 lakh/MW
  - (iii) Small gas turbine power generating stations: Rs. 9.84 lakh/MW
  - (iv) Lignite-fired generating stations : Rs. 10.82 lakh/MW

The above operation and maintenance expense norms are for the base year commencing April 1, 2005, which shall be escalated at the rate of 4 per cent per annum to arrive at permissible operation and maintenance expenses for the relevant year of tariff period.

(b) Hydro power generating stations

The base operation and maintenance expenses shall be fixed at 1.5 percent of the approved original cost of the project, in the year of commissioning and shall be escalated at a rate of 4 per cent per annum for the subsequent years.

**35 Energy charges**

35.1 Thermal generating stations

- (a) Energy charges shall cover fuel costs and shall be worked out on the basis of ex-bus energy sent out corresponding to scheduled generation as per the following formula:

Energy Charges (Rs) = Rate of Energy Charges in Rs/kWh X Ex-bus energy sent out corresponding to scheduled generation for the month in kWh

Where,

Rate of Energy Charges (REC) shall be the sum of the cost of normative quantities of primary and secondary fuel for one-kWh of ex-bus energy sent-out corresponding to scheduled generation and shall be computed as under:

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

Where,

$P_p$  = Landed cost of primary fuel namely coal or lignite or gas or liquid fuel in Rs/Kg or Rs/cubic-metre ( $m^3$ ) 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  $m^3$ , 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

$P_s$  = Landed cost of Secondary fuel oil in Rs./ml

$(Q_s)_n$  = Normative Quantity of Secondary fuel oil in ml/kWh as per Regulation 33.1.4, as the case may be, and

$AUX_n$  = Normative Auxiliary Energy Consumption as percentage of gross generation as per Regulation 33.1.2, as the case may be.

- (b) 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 gross calorific value of coal/lignite or gas or liquid fuel received and burnt and landed cost incurred by the Generating Company for procurement of coal/lignite, oil, or gas or liquid fuel, as the case may be. In case of any dispute, an appropriate application in accordance with the Conduct of Business Regulations shall be made before the Commission.

- (c) Landed Cost of fuel

The landed cost of fuel shall include price of fuel corresponding to the grade/quality of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/ road/ pipeline or any other means, and, for the purpose of calculation of energy charges, shall be arrived at after considering transit losses as per Regulation 33.1.6

## 35.2 Hydro power generating stations

### 35.2.1 Energy Charges

- (a) Energy charges shall be worked out on the basis of paise per kWh rate on ex-bus energy scheduled to be sent out from the hydro power generating station.
- (b) The energy rate for a hydro power generating station shall be such rate as may be notified by the Commission from time to time, based on the price/variable cost of the least-cost available alternative source of power if such hydro power generating station was not to be despatched in accordance with the final despatch schedule of the State Load Despatch Centre.
- (c) The energy charge shall be computed in accordance with the following formula

Energy Charge = Saleable Energy x Energy Rate

## **36 Charges for unscheduled interchange**

- 36.1 The generating station may be entitled to receive or shall be required to bear, as the case may be, the charges for deviations between energy sent-out corresponding to scheduled generation and actual energy sent-out, in accordance with the Balancing and Settlement Code, as may be published by the State Load Despatch Centre and approved by the Commission:

Provided that the rate for determination of such charges shall be as notified by the Commission from time to time.

### **37 Incentive**

#### 37.1 Thermal generating stations

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.

#### 37.2 Hydro power generating stations

(a) Incentive shall be payable in case of all generating stations, including in case of new generating stations in the first year of operation, when the capacity index ( $CI_i$ ) exceeds 90 per cent for purely run-of-river power generating stations and 85 per cent 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 per cent.

(b) Incentive shall be payable to the generating company in accordance with the following formula:

$$\text{Incentive} = 0.65 \times \text{Annual Fixed Charge} \times (CI_A - CI_N)/100$$

(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 per cent for purely run of the river hydro power generating stations and 85 per cent for pondage/storage type hydro power generating stations.

### **38 Rebate / Late payment surcharge**

38.1 For payment of bills through a letter of credit on presentation, the Generating Company and Distribution Licensee may mutually agree to a maximum rebate of 2 per cent of the bill amount. If the payments are made within one week of presentation of the bill, the Generating Company and Distribution Licensee may mutually agree to a maximum rebate of 1.25 per cent of the bill amount.

38.2 In case the payment of bills is delayed beyond a period of two (2) months from the date of billing, a late payment surcharge at the rate of 1.25 per cent per month shall be allowed to be levied by the Generating Company.

### **39 Billing and payment of charges**

39.1 Billing and payment of charges shall be done on a monthly basis.

### **40 Demonstration of Declared Capacity**

40.1 The Generating Company may be required to demonstrate the declared capacity of its generating station as and when required by the State Load Despatch Centre. In the event the Generating Company fails to demonstrate the declared capacity, the fixed charges due to the Generating Company shall be reduced as a measure of penalty.

- 40.2 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, the penalty shall be multiplied in the same geometrical progression as per the Order of the Commission.
- 40.3 Where the declared capacity of the generating station is on the lower side and actual generation is more than the declared capacity, then any charges for unscheduled interchange due to the Generating Company on account of such extra generation shall be reduced to zero and the amount shall be credited to the account of the Distribution Licensee in proportion to the share of the Distribution Licensee in the installed capacity of such generating station.
- 40.4 The operating log books of the generating station shall be available for review by the Commission.

#### **41 Deemed generation**

- 41.1 In case of reduced generation by a hydro power generating station on account of reasons beyond the control of the generating station or on account of non-availability of Transmission Licensee's transmission lines or on receipt of backing down instructions from the State Load Despatch Centre resulting in spillage of water, the energy charges on account of such spillage shall be payable to the Generating Company.
- 41.2 Energy charges on the above account shall not be allowable if the energy generated during the year is equal to or more than the design energy.

## **PART F: TRANSMISSION**

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### **42 Applicability**

42.1 The regulations contained in this Part shall apply in determining tariffs for access to and use of the intra-State transmission system of a Transmission Licensee pursuant to a Bulk Power Transmission Agreement or other arrangement entered into with a Transmission System User on or after the date of notification of these Regulations.

Provided that the Commission may deviate from the norms contained in this Part or stipulate alternative norms for particular cases, where it so deems appropriate, having regard to the circumstances of the case:

Provided further that the reasons for such deviation shall be recorded in writing:

Provided further that in case of an existing transmission system, the Commission shall determine the tariffs having regard to the historical performance of such transmission system and reasonable opportunities for improvement in performance, if any.

42.2 The Commission shall be guided by the terms and conditions contained in this Part in specifying the rates, charges, terms and conditions for use of intervening transmission facilities pursuant to an application made in this regard by a Licensee under the proviso to Section 36 of the Act.

### **43 Components of tariff**

43.1 The transmission charges for access to and use of the intra-State transmission system of a Transmission Licensee shall comprise the following:

- (a) transmission system access charges; and
- (b) annual transmission charges.

#### **43.2 Transmission system access charges**

43.2.1 Any person who is eligible to apply for access to the intra-State transmission system of a Transmission Licensee shall be entitled to obtain such access in accordance with the Transmission Open Access Regulations and shall be liable to pay the charges for obtaining such access as specified in this Regulation.

Explanation - For the purpose of this Regulation, such person who, being eligible for transmission open access, has applied for allocation of transmission capacity rights and has agreed to the carrying out of works for obtaining such access shall hereinafter be referred to as the “intending Transmission System User”, and may include an existing Transmission System User in respect of any increase in allocated transmission capacity rights applied for by such existing user.

43.2.2 Where the access of the intending Transmission System User to the intra-State transmission system entails works of transmission lines or other transmission assets dedicated to such user, the Transmission Licensee shall be entitled to recover, through the transmission system access charges, all expenses reasonably incurred on such works for providing access to such intending Transmission System User.

43.2.3 Where the access of the intending Transmission System User entails other works, not covered under Regulation 43.2.2, relating to the intra-State transmission system, the Transmission Licensee shall recover the expenses relating to such works through annual transmission charges, in accordance with Regulation 43.3 below:

Provided however, that the Transmission Licensee and the intending Transmission System User may mutually agree that the expenses incurred on works under this Regulation 43.2.3 shall be recovered from the intending Transmission System User through transmission system access charges, in which case such expenses shall not be recovered through annual transmission charges:

43.2.4 Where any works for obtaining access has been carried out by the intending Transmission System User, the Transmission Licensee shall be entitled to recover supervision charges at the rate of 15 per cent of the cost of labour employed for carrying out such works and shall not be entitled to recover any other expenses with regard to such works carried out by the intending Transmission System User.

43.2.5 The works for providing access to the intra-State transmission system shall be maintained by the Transmission Licensee for the duration of the Bulk Power Transmission Agreement between the Transmission Licensee and the Transmission System User:

43.2.6 Where the Transmission System User has paid for the works carried out to provide him access to the intra-State transmission system of the Transmission Licensee, the Transmission System User shall be entitled to the depreciated value of such works paid for by him upon termination of the Bulk Power Transmission Agreement:

Provided that where the Transmission System User has carried out the works to provide him access to the intra-State transmission system of the Transmission Licensee, the Transmission System User shall be entitled to retain such works upon termination of the Bulk Power Transmission Agreement.

43.2.7 The transmission system access charges may be recovered in any one of the following methods, in accordance with the terms of the Bulk Power Transmission Agreement:

- (a) As a one-time payment by the Transmission System User at the time of obtaining access; or
- (b) As a series of payments over the duration of the Bulk Power Transmission Agreement, due regard being given to the Transmission Licensee's cost of capital based on the normative debt:equity ratio as per Regulation 47; or
- (c) As any combination of (a) and (b) above.

43.2.8 Any dispute between the Transmission Licensee and the intending Transmission System User with regard to the works to be carried out to give access to the intending Transmission System User or with regard to the transmission system access charges shall be referred to the Commission for determination or to such other forum as may be stipulated.

43.3 Annual transmission charges

43.3.1 The annual transmission charges shall provide for the recovery of the aggregate revenue requirement of the Transmission Licensee for the financial year, as reduced by the amount of non-tariff income and income from Other Business, as approved by the Commission and comprising the following:

Aggregate revenue requirement:

- (a) Return on equity capital;
- (b) Income-tax;
- (c) Interest on loan capital;
- (d) Depreciation, including advance against depreciation, and amortisation of intangible assets;
- (e) Operation and maintenance expenses;
- (f) Interest on working capital and deposits from Transmission System Users; and
- (g) Contribution to contingency reserves.

Annual transmission charges = Aggregate revenue requirement, as above, minus:

- (h) Non-tariff income; and
- (i) Income from Other Business, to extent specified in these Regulations.

43.3.2 The annual transmission charges of the Transmission Licensee shall be determined by the Commission on the basis of an application for determination of tariff made by the Transmission Licensee in accordance with **Part B** of these Regulations.

**44 Multi-year tariffs**

44.1 Except where exempted by the Commission, the regulations contained in **Part C** of these Regulations shall apply to all Transmission Licensees in the State with effect from April 1, 2006.

**45 Investment plan**

45.1 The Transmission Licensee shall submit an investment plan with full details of his proposed capital expenditure projects to the Commission for approval either along with the application for determination of tariff or separately, at such time as may be directed by the Commission:

Provided that the investment plan shall be an annual rolling plan and the period covered by the plan shall coincide with the period for which forecasts/ estimates are being submitted as part of such application.

- 45.2 The investment plan shall be a least cost plan for undertaking investments on strengthening and augmentation of the intra-State transmission system of the Transmission Licensee.
- 45.3 The investment plan shall cover all capital expenditure projects of a value exceeding Rs. Ten (10) crores and shall be in such form as may be stipulated by the Commission from time to time.
- 45.4 The investment plan shall be accompanied by such information, particulars and documents as may be required showing the need for the proposed investments, alternatives considered, cost/ benefit analysis and other aspects that may have a bearing on the transmission charges.
- 45.5 The investment plan of the Transmission Licensee shall be consistent with the transmission system plan for the intra-State transmission system developed in accordance with the Transmission Open Access Regulations.
- 45.6 The Commission shall review the investment plan submitted by the Transmission Licensee taking into consideration the prudence of the proposed expenditure and estimated impact on tariff and thereafter, shall either-
- (a) give an in-principle approval to the investment plan submitted by the Transmission Licensee, with such modifications or conditions as the Commission deems appropriate; or
  - (b) reject the investment plan submitted by the Transmission Licensee and require the Transmission Licensee to submit a fresh investment plan taking into consideration such factors as the Commission may deem necessary.
- 45.7 The Transmission Licensee shall submit, along with the application for determination of tariff or along with the application for annual performance review, as the case may be, details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require to assess such progress.

## **46 Capital cost**

- 46.1 The approved investment plan of the Transmission Licensee shall be the basis for determining the annual allowable capital cost for each financial year for any capital expenditure project initiated on or after April 1, 2005 with a value exceeding Rs Ten (10) crores.
- 46.2 For each capital expenditure project, the sum total of annual allowable capital cost from the date of commencement of such project till the date of commissioning shall be the original cost of such project:

Provided that the Commission may permit reasonable additional costs, which are in the nature of capital expenditure, to be included in the original cost of the project beyond the date of commissioning, upon application for the same made by the Transmission Licensee.

46.3 Where the actual cost incurred on a capital expenditure project exceeds the estimate of original cost approved as part of the investment plan or where the Transmission Licensee has reasonable grounds to believe that the actual cost will exceed such approved estimate, then the Transmission Licensee shall apply to the Commission for approval for variation in the estimate of original cost of the project, as part of the annual performance review:

Provided that the Commission shall, after due scrutiny, permit such increase to be dealt with in the manner provided in Regulation 18 above if it is satisfied that the increase is reasonable and has arisen due to uncontrollable factors.

46.4 Where the actual cost incurred on a capital expenditure project is lower than the approved estimate of original cost and such savings in capital cost is on account of controllable factors, the Commission shall, after due scrutiny, permit the resultant savings in interest on loan capital during the construction period of such project to be dealt with in the manner provided in Regulation 19 above:

Provided that where the savings in capital cost is due to uncontrollable factors, it shall be dealt with in the manner provided in Regulation 18 above.

46.5 Notwithstanding anything contained in this Regulation 46, for any capital expenditure project with a value not exceeding Rs Ten (10) crores, the actual cost as recorded in the books of account of the Transmission Licensee shall be the basis for determining the annual allowable capital cost and the original cost of project, subject to prudence check by the Commission.

46.6 Notwithstanding anything contained in this Regulation 46, for any capital expenditure project approved before April 1, 2005, the actual cost as recorded in the books of account of the Transmission Licensee shall be the basis for determining the annual allowable capital cost and the original cost of project, subject to prudence check by the Commission.

46.7 The provisions of the Statements of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India shall apply, to the extent not inconsistent with these Regulations, in determining the original cost of capital expenditure projects and/ or original cost of fixed assets capitalized.

46.8 The annual allowable capital cost shall be assumed to have been evenly incurred during such financial year, for the purpose of these Regulations.

46.9 An additional amount of 1.5 per cent of the original cost of a capital expenditure project shall be permitted to be included in the original cost on account of capitalized initial spares.

46.10 The impact of any foreign exchange rate variation on a foreign currency loan taken to finance a capital expenditure project shall be treated in accordance with the Statements of Accounting Standard (AS 11): Accounting for the Effects of Changes in Foreign Exchange Rates of the Institute of Chartered Accountants of India.

Provided that the actual or normative loan capital determined as per Regulations 47 and Regulations 48 of these Regulations shall be considered for inclusion in the above.

- 46.11 The amount of any contributions made by Transmission System Users towards works for access to the intra-State transmission system of the Transmission Licensee shall be deducted from the original cost for such project for the purpose of calculating the amount of loan capital and equity capital under these Regulations:

Provided that for the purpose of depreciation under Regulation 50.4 below, the original cost of project before deduction of any such contributions shall be taken into account.

#### **47 Debt-equity ratio**

- 47.1 Any capital expenditure incurred during a financial year on a capital expenditure project commenced on or after April 1, 2005 and/ or on purchase of fixed asset on or after such date shall be assumed to be financed at a normative debt:equity ratio of 70:30, to be applied on the annual allowable capital cost for such financial year:

- 47.2 Any fixed asset capitalized on account of a capital expenditure project commenced on or after April 1, 2005 or on account of fixed asset purchased on or after such date shall be assumed to have been financed at a normative debt:equity ratio of 70:30 to be applied on the original cost of such project/ fixed asset.

- 47.3 Any approved change in the original cost of a project/ fixed asset after the date of commissioning shall be assumed to have been financed at the normative debt:equity ratio.

- 47.4 Where the Transmission Licensee has achieved financial closure prior to the date of notification of these Regulations in respect of a capital expenditure project commenced on or after April 1, 2005 with a debt:equity ratio less than 70:30, he may apply to the Commission for exemption from Regulation 47.1 along with reasons therefor:

Provided further that the Commission may exempt such capital expenditure project from the normative debt:equity ratio if it believes that the application of Regulation 47.1 is likely to adversely affect the commissioning schedule of such project and thereby, the cost and/ or quantity of electricity supplied to consumers.

- 47.5 The Commission may, if it deems appropriate, allow a relaxation in the debt:equity ratio norm specified in this Regulation 47 where the applicant reasonably demonstrates inability to raise loan capital, up to the specified norm, due to market constraints, corporate / group exposure norms of lenders or similar factors:

Provided that the Commission shall give any interested or affected party the opportunity to make representations before approving a relaxation in the debt:equity ratio norm under this Regulation 47.5.

#### **48 Loan repayment schedule**

- 48.1 The repayment schedule for all approved loans of the Transmission Licensee as at March 31, 2005 shall be in accordance with the loan agreements:

Provided that where any new loan (or additional tranche of existing loan) is taken on or after April 1, 2005 in respect of an approved capital expenditure project commenced (but not commissioned) prior to April 1, 2005, then any such loan

taken till the date of commissioning of the project shall be treated as an existing loan for the purpose of recovery of interest expense under these Regulations.

- 48.2 The loan capital calculated using the normative debt:equity ratio under Regulation 47 above shall be assumed to be repaid each year based on a normative repayment schedule:

Provided that the amount of such normative repayment for a year shall be equal to the amount of depreciation on the fixed asset to which such loan relates:

Provided further that where the outstanding normative loan balance is less than the amount of normative loan repayment calculated as above, the repayment shall be assumed to be equal to the outstanding normative loan balance and no further amount shall be permitted on account of such loan:

Provided also that all normative repayments are assumed to be made on September 30<sup>th</sup> of each financial year.

- 48.3 Where the actual amount of loan repayment in any financial year exceeds the amount of depreciation allowable under Regulation 50.4.1, the Transmission Licensee shall be allowed an advance against depreciation for the difference between the actual amount of such repayment and the allowable depreciation for such financial year:

Provided that the advance against depreciation shall be restricted to 1/10<sup>th</sup> of the principal amount of loans that are to be repaid in such financial year minus the amount of depreciation allowable under Regulation 50.4.1:

Provided also that the amount of loan repayment, calculated in accordance with Regulation 48.1 and Regulation 48.2 above shall be assumed to be increased by the amount of such advance against depreciation allowed to the Transmission Licensee:

Provided also that upon repayment of the entire loan amount, the original cost of the fixed asset shall be reduced by the amount of accumulated depreciation and by the total amount of advance against depreciation availed by the Transmission Licensee and the resulting depreciable value shall be spread over the balance useful life of the fixed asset.

## **49 Norms for operation**

- 49.1 Target availability for full recovery of annual transmission charges

- (a) AC system :- 98 per cent  
(b) HVDC bi-pole links and HVDC back-to-back stations :- 95 per cent

### **Note 1:**

Recovery of annual transmission charges below the level of target availability shall be on pro rata basis. At zero availability, no transmission charges shall be payable.

### **Note 2:**

The target availability shall be calculated in accordance with procedure provided in the **Annexure-II** to these Regulations.

## **50 Calculation of aggregate revenue requirement**

### **50.1 Return on equity capital**

50.1.1 The Transmission Licensee shall be allowed a return at the rate of 14 per cent per annum, in Indian Rupee terms, on the amount of approved equity capital:

Explanation I – for the purpose of this Regulation, equity capital shall be the sum total of paid-up equity capital, preference share capital, fully / compulsorily convertible debentures (or other financial instruments with equivalent characteristics), foreign currency convertible bonds, share premium account and any reserves, available for distribution as dividend or for capitalization by way of issue of bonus shares, which have been invested in the Transmission Business. The amount of any grant, revaluation reserve, development reserve, contingency reserve and contributions from users shall not be included in the equity capital. The amount reflected in the books of account as deferred tax liability or deferred tax asset of the Transmission Business shall be added or deducted, as the case may be, from the amount of equity capital

Explanation II – for the purpose of this Regulation, the amount of equity capital as at April 1, 2005 shall be computed as follows:

Equity capital as at April 1, 2004 as determined by the Commission in accordance with Explanation I above, plus

Equity capital portion of the allowable capital cost, for the investments put to use in transmission business, calculated in accordance with Regulation 46 and Regulation 47 above, for the year ending March 31, 2005:

Provided that in case of a Transmission Licensee formed as a result of a transfer scheme under Section 131 of the Act, the date of the said transfer scheme shall be the effective date instead of April 1, 2004 for determination of equity capital above.

The amount of equity capital at the commencement of each financial year thereafter shall be computed as follows:

Equity capital as at the commencement of the previous financial year, calculated in accordance with these Regulations, plus

Equity capital portion of the allowable capital cost, for the investments put to use in transmission business, calculated in accordance with Regulation 46 and Regulation 47 above, for the previous financial year.

50.1.2 The return on equity capital shall be computed in the following manner:

- (a) Return at the allowable rate as per Regulation 50.1.1 above, applied on the amount of equity capital at the commencement of the financial year; plus
- (b) Return at the allowable rate as per Regulation 50.1.1 above, applied on 50 per cent of the equity capital portion of the allowable capital cost, for the

investments put to use in transmission business, calculated in accordance with Regulation 46 and Regulation 47 above, for such financial year.

50.1.3 Any over-recovery or under-recovery of return on equity capital on account of variations in the annual allowable capital cost from the approved level shall be attributed to the same controllable or uncontrollable factors as have resulted in such capital cost variations.

50.2 Income-tax

50.2.1 Income-tax on the income of the Transmission Business of the Transmission Licensee shall be allowed for inclusion in the aggregate revenue requirement.

50.2.2 The Transmission Licensee shall include an estimate of the income-tax liability of his Transmission Business along with the application for determination of tariff, based on the provisions of the Income-Tax Act, 1961:

Provided that any change in such income-tax liability on account of assessment under the Income-tax Act, 1961 shall be dealt with as being on account of uncontrollable factors:

Provided further that any change in such income-tax liability on account of changes in the provisions of the Income-Tax Act, 1961 shall be dealt with as being on account of uncontrollable factors:

Provided further that any change in such income-tax liability on account of change in income of the Transmission Licensee from the approved forecast shall be attributed to the same controllable or uncontrollable factors as have resulted in the change in income and shall be dealt with accordingly.

50.2.3 The benefits of any income-tax holiday, credit for unabsorbed losses or unabsorbed depreciation on the intra-State transmission system or any part thereof shall be taken into account in calculation of the income-tax liability of the Transmission Business.

50.3 Interest on loan capital

50.3.1 The Transmission Licensee shall be allowed to recover the interest expense on all approved loans as at March 31, 2005, based on the approved interest rate and the repayment schedules of such loans in accordance with Regulation 48 above:

50.3.2 The Transmission Licensee shall be allowed to recover the interest rate on loan capital for approved capital expenditure projects commenced on or after April 1, 2005, approved additions to fixed assets and approved purchases of fixed assets on or after such date based on the following terms and conditions:

- (a) The interest rate shall be as approved by the Commission in the investment plan;
- (b) The value base shall be the normative loan capital of such capital expenditure project / fixed asset;
- (c) The normative loan capital shall be assumed to be repaid in accordance with the normative repayment schedule as per Regulation 48 of these Regulations.

50.3.3 The provisions of the Statements of Accounting Standard (AS 16): Borrowing Costs of the Institute of Chartered Accountants of India shall apply, to the extent not inconsistent with the provisions of these Regulations, in the determination of interest on loan capital.

50.3.4 The Commission shall allow taxes on interest, commitment charges, finance charges and any exchange rate difference arising from foreign currency borrowings, to the extent recognised as interest cost in the books of account of the Transmission Licensee.

50.4 Depreciation, including Advance Against Depreciation

50.4.1 The Transmission Licensee shall be permitted to recover depreciation on the value of fixed assets used in the Transmission Business computed in the following manner:

- (a) The approved original cost of the project/ fixed assets shall be the value base for calculation of depreciation;
- (b) Depreciation shall be computed annually based on the straight line method at the rates specified in the **Annexure I** to these Regulations:

Provided that the residual value of the asset shall be considered at 10 per cent of the allowable capital cost and depreciation shall be allowed upto a maximum of 90 per cent of the allowable capital cost of the asset:

Provided further that depreciation shall not be permitted on land and the value of land shall be excluded from the allowable capital cost for the purpose of calculation of depreciation:

Provided also that the provisions of the Statements of Accounting Standard (AS6): Depreciation Accounting shall apply, to the extent not inconsistent with these Regulations, in calculating depreciation under these Regulations.

50.4.2 In addition to depreciation, the Transmission Licensee shall be entitled to Advance Against Depreciation, computed in accordance with Regulation 48.3 above.

50.4.3 The Transmission Licensee shall be permitted to recover amortisation of intangible assets upto such level as may be approved by the Commission.

Explanation – for the purpose of this Regulation, the term “intangible assets” shall mean such pre-operative and promotional expenditure incurred in cash and shown as a debit in the capital account of the Transmission Licensee as has fairly arisen in promoting the Transmission Business and shall exclude any amount paid or otherwise accounted as goodwill.

50.5 Operation and Maintenance expenses

50.5.1 The Transmission Licensee shall be permitted to recover all reasonable and justifiable operation and maintenance expenses relating to the Transmission Business:

Provided that the Transmission Licensee shall submit a forecast of all such operation and maintenance expenses along with the application for determination of tariff:

Provided further that such forecast shall be based on past performance and/ or operating norms and shall be supported by detailed calculations that explain the basis for such forecast:

Provided further that the Commission may adopt suitable norms for allowance of operation and maintenance expenses relating to the Transmission Business.

Explanation – for the purpose of this Regulation, “operation and maintenance expenses” shall include the following:

- (a) employee costs, including bonus and contributions to provident fund, staff pension and gratuity computed under any law for the time being in force or any scheme approved by the Commission;
- (b) repairs and maintenance;
- (c) rent, rates and taxes, other than income-tax;
- (d) legal charges;
- (e) provisions for doubtful debts;
- (f) auditors’ fees;
- (g) expenses on apprentice and training schemes;
- (h) any other expense not covered above or elsewhere in these Regulations, relating to the Transmission Business that is allowable as a deduction in the calculation of income under the Income-tax Act, 1961.

50.6 Interest on working capital

50.6.1 The Transmission Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:

- (a) One-twelfth of the amount of operation and maintenance expenses for such financial year; plus
- (b) One-twelfth of the sum of the book value of stores, materials and supplies including fuel on hand at the end of each month of such financial year; plus
- (c) One and a half months equivalent of the expected revenue from transmission charges at the prevailing tariffs; minus
- (d) Amount, if any, held as security deposits from Transmission System Users.

50.6.2 Interest shall be allowed at a rate equal to the Short Term Prime Lending Rate of the State Bank of India as at the date on which the application for determination of tariff is made.

50.6.3 Interest shall be allowed on the amount held as security deposit from Transmission System Users at the Bank Rate as at the date on which the application for determination of tariff is made.

#### 50.7 Contribution to contingency reserves

50.7.1 Where the Transmission Licensee has made an appropriation to the Contingencies Reserve, a sum not less than 0.25 per cent and not more than 0.5 per cent of the original cost of fixed assets shall be allowed towards such appropriation in the calculation of aggregate revenue requirement:

Provided that where the amount of such Contingencies Reserves exceeds five (5) per cent of the original cost of fixed assets, no such appropriation shall be allowed which would have the effect of increasing the reserve beyond the said maximum:

Provided further that the amount so appropriated shall be invested in securities authorized under the Indian Trusts Act, 1882 within a period of six months of the close of the financial year.

50.7.2 The Contingency Reserve shall not be drawn upon during the term of the licence except to meet such charges as may be approved by the Commission as being:

- (a) Expenses or loss of profits arising out of accidents, strikes or circumstances which the management could not have prevented;
- (b) Expenses on replacement or removal of plant or works other than expenses requisite for normal maintenance or renewal;
- (c) Compensation payable under any law for the time being in force and for which no other provision is made:

Provided that such drawal from Contingency Reserve shall be computed after making due adjustments for any other compensation that may have been received by the Licensee as part of an insurance cover.

## **51 Non-Tariff Income**

51.1 The amount of non-tariff income relating to the Transmission Business as approved by the Commission shall be deducted from the aggregate revenue requirement in determining the annual transmission charges of the Transmission Licensee:

Provided that the Transmission Licensee shall submit full details of his forecast of non-tariff income to the Commission in such form as may be stipulated by the Commission from time to time.

## **52 Income from Other Business**

- 52.1 Where the Transmission Licensee has engaged in any Other Business, an amount equal to one-third of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the aggregate revenue requirement in calculating the annual transmission charges of the Transmission Licensee:

Provided that the Transmission Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Transmission Business and the Other Business and shall submit the Allocation Statement to the Commission along with his application for determination of tariff:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceed the revenues from such Other Business or for any other reason, no amount shall be allowed to be added to the aggregate revenue requirement of the Transmission Licensee on account of such Other Business.

## **53 Allocation of annual transmission charges**

- 53.1 The Transmission System Users shall share in the aggregate revenue requirement of the intra-State transmission system of the Transmission Licensee in such proportion as the transmission capacity rights of each Transmission System User bears to the total transmission capacity rights allotted in the intra-State transmission system:

Provided that the charges payable by the Transmission System Users may also take into consideration factors such as voltage, distance, direction, quantum of flow and time of use, as may be specified by the Commission in its order passed under sub-section (3) of Section 64 of the Act:

Provided that the charges shall be calculated on a daily basis by the Transmission Licensee and shall be billed every month, except where directed by the Commission for any Transmission System User or class of such users.

- 53.2 The annual transmission charge payable by a Transmission System User shall be computed in accordance with the following equation:

$$ATC = [ARR - NTI - OI] \times [CL / SCL]$$

Where ATC = Annual Transmission Charges

ARR = Aggregate Revenue Requirement of the Transmission Licensee, including all allowable expenses and return on equity capital, as approved by the Commission

NTI = Approved level of non-tariff income

OI = Approved level of income from Other Business

CL = Allotted Transmission Capacity Rights to the Transmission System User

SCL = Sum of Allotted Transmission Capacity Rights to all Transmission System Users

## **54 Transmission losses**

- 54.1 The energy losses in the transmission system of the Transmission Licensee, as determined by the State Load Despatch Centre and approved by the Commission, shall be borne by the Transmission System Users pro rata to their usage of the intra-state transmission system:

Provided that the Commission may stipulate a trajectory for transmission losses in accordance with Regulation 16 as part of the multi-year tariff framework applicable to the Transmission Licensee:

Provided that any variation between the actual level of transmission losses, as determined by the State Load Despatch Centre and the approved level shall be dealt with, as part of the annual performance review, in accordance with the mechanisms provided in Regulation 18 or Regulation 19 as the case may be:

Provided also that the Transmission Licensee shall not be permitted to recover, under this Regulation, energy losses arising from theft, pilferage, failure to meter or bill for electricity transmitted.

## **PART G: WHEELING**

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### **55 Separation of accounts**

- 55.1 Every Distribution Licensee shall make a separate application for determination of tariff for-
- (a) Wheeling of electricity;
  - (b) Retail sale of electricity:

Provided that every Distribution Licensee shall maintain separate records for the Distribution Business and shall prepare an Allocation Statement to enable the Commission determine the tariff pursuant to each such application made by the Distribution Licensee.

### **56 Applicability**

- 56.1 The regulations contained in this Part shall apply in determining tariff payable for wheeling of electricity by a Distribution System User who has been allowed open access to the distribution system of a Distribution Licensee in accordance with the Distribution Open Access Regulations:

Provided however that a Distribution System User who is directly connected to a transmission system shall not be required to pay any tariff under this Part.

## **57 Components of tariff**

57.1 The wheeling charges of the Distribution Licensee shall provide for the recovery of the aggregate revenue requirement, as provided in Regulation 66 of these Regulations, relating to the Distribution Business of the Distribution Licensee for the financial year, as reduced by the amount of non-tariff income and income from Other Business and shall comprise the following:

Aggregate revenue requirement:

- (a) Return on equity capital;
- (b) Income-tax;
- (c) Interest on loan capital;
- (d) Depreciation, including advance against depreciation and amortisation of intangible assets;
- (e) Operation and maintenance expenses;
- (f) Interest on working capital and deposits from consumers and Distribution System Users; and
- (g) Contribution to contingency reserves.

Wheeling charges = Aggregate revenue requirement, as above, minus:

- (h) Non-tariff income; and
- (i) Income from Other Business, to extent specified in these Regulations.

57.2 The wheeling charges of the Distribution Licensee shall be determined by the Commission on the basis of an application for determination of tariff made by the Distribution Licensee in accordance with **Part B** of these Regulations.

## **58 Multi-year tariffs**

58.1 Except where exempted by the Commission, the regulations contained in **Part C** of these Regulations shall apply to all Distribution Licensees in the State with effect from April 1, 2006.

## **59 Investment plan**

59.1 The Distribution Licensee shall submit an investment plan with full details of his proposed capital expenditure projects to the Commission for approval, either along with the application for determination of tariff or separately, at such time as may be directed by the Commission:

Provided that the investment plan shall be an annual rolling plan and the period covered by the plan shall coincide with the period for which forecasts/ estimates are being submitted as part of such application.

59.2 The investment plan shall be a least cost plan for undertaking investments on strengthening and augmentation of the distribution system of the Distribution Licensee.

- 59.3 The investment plan shall cover all capital expenditure projects of a value exceeding Rs. Ten (10) crores and shall be in such form as may be stipulated by the Commission from time to time.
- 59.4 The investment plan shall be accompanied by such information, particulars and documents as may be required showing the need for the proposed investments, alternatives considered, cost/ benefit analysis and other aspects that may have a bearing on the wheeling charges.
- 59.5 The Commission shall review the investment plan submitted by the Distribution Licensee taking into consideration the prudence of the proposed expenditure and estimated impact on tariff and thereafter, shall either-
- (a) give an in-principle approval to the investment plan submitted by the Distribution Licensee, with such modifications or conditions as the Commission deems appropriate; or
  - (b) reject the investment plan submitted by the Distribution Licensee and require the Distribution Licensee to submit a fresh investment plan taking into consideration such factors as the Commission may deem necessary.
- 59.6 The Distribution Licensee shall submit, along with the application for determination of tariff or along with the application for annual performance review, as the case may be, details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require to assess such progress.

## **60 Capital cost**

- 60.1 The approved investment plan of the Distribution Licensee shall be the basis for determining the annual allowable capital cost for each financial year for any capital expenditure project initiated on or after April 1, 2005 with a value exceeding Rs. Ten (10) crores.
- 60.2 For each capital expenditure project, the sum total of annual allowable capital cost from the date of commencement of such project till the date of commissioning shall be the original cost of such project:
- Provided that, upon application for the same made by the Distribution Licensee, the Commission may permit additional costs, which are in the nature of capital expenditure, to be included in the original cost of the project beyond the date of commissioning.
- 60.3 Where the actual cost incurred on a capital expenditure project exceeds the estimate of original cost approved as part of the investment plan or where the Distribution Licensee has reasonable grounds to believe that the actual cost will exceed such approved estimate, then the Distribution Licensee shall apply to the Commission for approval for variation in the estimate of original cost of the project, as part of the annual performance review:
- Provided that the Commission shall, after due scrutiny, permit such increase to be dealt with in the manner provided in Regulation 18 above if it is satisfied that the increase is reasonable and has arisen due to uncontrollable factors.

60.4 Where the actual cost incurred on a capital expenditure project is lower than the approved estimate of original cost and such savings in capital cost is on account of controllable factors, the Commission shall, after due scrutiny, permit the resultant savings in interest on loan capital during the construction period of such project to be dealt with in the manner provided in Regulation 19 above:

Provided that where the savings in capital cost is due to uncontrollable factors, it shall be dealt with in the manner provided in Regulation 18 above.

60.5 Notwithstanding anything contained in this Regulation 60, for any capital expenditure project with a value not exceeding Rs Ten (10) crores, the actual cost as recorded in the books of account of the Distribution Licensee shall be the basis for determining the annual allowable capital cost and the original cost of project, subject to prudence check by the Commission.

60.6 Notwithstanding anything contained in this Regulation 60, for any capital expenditure project approved before April 1, 2005, the actual cost as recorded in the books of account of the Distribution Licensee shall be the basis for determining the annual allowable capital cost and the original cost of project, subject to prudence check by the Commission.

60.7 The provisions of the Statements of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India shall apply, to the extent not inconsistent with these Regulations, in determining the original cost of capital expenditure projects and/ or original cost of fixed assets capitalized.

60.8 The annual allowable capital cost shall be assumed to have been evenly incurred during such financial year, for the purpose of these Regulations.

60.9 An additional amount of 1.5 per cent of the original cost of project shall be permitted to be included in the original cost on account of capitalized initial spares.

60.10 The impact of any foreign exchange rate variation on a foreign currency loan taken to finance a capital expenditure project shall be treated in accordance with the Statements of Accounting Standard (AS11): Accounting for the Effects of Changes in Foreign Exchange Rates of the Institute of Chartered Accountants of India.

Provided that the actual or normative loan capital determined as per Regulations 61 and 62 of these Regulations shall be considered for inclusion in the above.

60.11 The amount of any contributions made by consumers and Distribution System Users towards works for access to the distribution system of the Distribution Licensee shall be deducted from the original cost for such project for the purpose of calculating the amount of loan capital and equity capital under these Regulations:

Provided that for the purpose of depreciation under Regulation 63.4 below, the original cost of project before deduction of any such contributions shall be taken into account.

## **61 Debt-equity ratio**

- 61.1 Any capital expenditure incurred during a financial year on a capital expenditure project commenced on or after April 1, 2005 and/ or on purchase of fixed asset on or after such date shall be assumed to be financed at a normative debt:equity ratio of 70:30, to be applied on the annual allowable capital cost for such year.
- 61.2 Any fixed asset capitalized on account of a capital expenditure project commenced on or after April 1, 2005 or on account of fixed asset purchased on or after such date shall be assumed to have been financed at a normative debt:equity ratio of 70:30 to be applied on the original cost of such project/ fixed asset.
- 61.3 Any approved change in the original cost of a project/ fixed asset after the date of commissioning shall be assumed to have been financed at the normative debt:equity ratio.
- 61.4 Where the Distribution Licensee has achieved financial closure prior to the date of notification of these Regulations in respect of a capital expenditure project commenced on or after April 1, 2005 with a debt:equity ratio less than 70:30, he may apply to the Commission for exemption from Regulation 61.1 along with reasons therefor:
- Provided further that the Commission may exempt such capital expenditure project from the normative debt:equity ratio if it believes that the application of Regulation 61.1 is likely to adversely affect the commissioning schedule of such project and thereby, the cost and/ or quantity of electricity supplied to consumers.
- 61.5 The Commission may, if it deems appropriate, allow a relaxation in the debt:equity ratio norm specified in this Regulation 61 where the applicant reasonably demonstrates inability to raise loan capital, up to the specified norm, due to market constraints, corporate / group exposure norms of lenders or similar factors:
- Provided that the Commission shall give any interested or affected party the opportunity to make representations before approving a relaxation in the debt:equity ratio norm under this Regulation 61.5.

## **62 Loan repayment schedule**

- 62.1 The repayment schedule for all approved loans of the Distribution Licensee as at March 31, 2005 shall be in accordance with the loan agreements:
- Provided that where any new loan (or additional tranche of existing loan) is taken on or after April 1, 2005 in respect of an approved capital expenditure project commenced (but not commissioned) prior to April 1, 2005, then any such loan taken till the date of commissioning of the project shall be treated as an existing loan for the purpose of recovery of interest expense under these Regulations.
- 62.2 The loan capital calculated using the normative debt:equity ratio under Regulation 61 above shall be assumed to be repaid each year based on a normative repayment schedule:
- Provided that the amount of such normative repayment for a year shall be equal to the amount of depreciation on the fixed asset to which such loan relates:

Provided further that where the outstanding normative loan balance is less than the amount of normative loan repayment calculated as above, the repayment shall be assumed to be equal to the outstanding normative loan balance and no further amount shall be permitted on account of such loan:

Provided also that all normative repayments are assumed to be made on September 30<sup>th</sup> of each financial year.

- 62.3 Where the actual amount of loan repayment in any financial year exceeds the amount of depreciation allowable under Regulation 63.4.1, the Distribution Licensee shall be allowed an advance against depreciation for the difference between the actual amount of such repayment and the allowable depreciation for such financial year:

Provided that the advance against depreciation shall be restricted to 1/10<sup>th</sup> of the principal amount of loans that are to be repaid in such financial year minus the amount of allowable depreciation under Regulation 63.4.1:

Provided also that the amount of loan repayment, calculated in accordance with Regulation 62.1 and Regulation 62.2 above shall be assumed to be increased by the amount of such advance against depreciation allowed to the Distribution Licensee:

Provided also that upon repayment of the entire loan amount, the original cost of the fixed asset shall be reduced by the aggregate of accumulated depreciation and advance against depreciation availed by the Distribution Licensee and the resulting depreciable value shall be spread over the balance useful life of the fixed asset.

## **63 Calculation of aggregate revenue requirement**

### **63.1 Return on equity capital**

- 63.1.1 The Distribution Licensee shall be allowed a return at the rate of 16 per cent per annum, in Indian Rupee terms, on the amount of approved equity capital:

Explanation I – for the purpose of this Regulation, equity capital shall be the sum total of paid-up equity capital, preference share capital, fully / compulsorily convertible debentures (or other financial instrument with equivalent characteristics), foreign currency convertible bonds, share premium account and any reserves, available for distribution as dividend or for capitalization by way of issue of bonus shares, which have been invested in the Distribution Business. The amount of any grant, revaluation reserve, development reserve, contingency reserve and contribution from users shall not be included in the equity capital. The amount reflected in the books of account as deferred tax liability or deferred tax asset of the Distribution Business shall be added or deducted, as the case may be, from the amount of equity capital.

Explanation II – for the purpose of this Regulation, the amount of equity capital as at April 1, 2005 shall be computed as follows:

Equity capital as at April 1, 2004 as determined by the Commission, in accordance with Explanation I above, plus

Equity capital portion of the allowable capital cost, for the investments put to use in distribution business, calculated in accordance with Regulation 60 and Regulation 61 above, for the year ending March 31, 2005:

Provided that in case of a Distribution Licensee formed as a result of a transfer scheme under Section 131 of the Act, the date of the said transfer scheme shall be the effective date instead of April 1, 2004 for determination of equity capital above.

The amount of equity capital at the commencement of each financial year thereafter shall be computed as follows:

Equity capital as at the commencement of the previous financial year, calculated in accordance with these Regulations, plus

Equity capital portion of the allowable capital cost, for the investments put to use in distribution business, calculated in accordance with Regulation 60 and Regulation 61 above, for the previous financial year.

63.1.2 The return on equity capital shall be computed in the following manner:

- (a) Return at the allowable rate as per Regulation 63.1.1 above, applied on the amount of equity capital at the commencement of the financial year; plus
- (b) Return at the allowable rate as per Regulation 63.1.1 above, applied on 50 per cent of the equity capital portion of the allowable capital cost, for the investments put to use in distribution business, calculated in accordance with Regulation 60 and Regulation 61 above, for such financial year.

63.1.3 Any over-recovery or under-recovery of return on equity capital on account of variations in the annual allowable capital cost from the approved level shall be attributed to the same controllable or uncontrollable factors as have resulted in such capital cost variations.

## 63.2 Income-tax

63.2.1 Income-tax on the income of the Distribution Business of the Distribution Licensee shall be allowed for inclusion in the aggregate revenue requirement.

63.2.2 The Distribution Licensee shall include an estimate of the income-tax liability of his Distribution Business along with the application for determination of tariff, based on the provisions of the Income-Tax Act, 1961:

Provided that any change in such income-tax liability on account of assessment under the Income-tax Act, 1961 shall be dealt with as being on account of uncontrollable factors:

Provided further that any change in such income-tax liability on account of changes in the provisions of the Income-Tax Act, 1961 shall be dealt with as being on account of uncontrollable factors:

Provided further that any change in such income-tax liability on account of change in income of the Distribution Licensee from the approved forecast shall be attributed to the same controllable or uncontrollable factors as have resulted in the change in income and shall be dealt with accordingly.

63.2.3 The benefits of any income-tax holiday, credit for unabsorbed losses or unabsorbed depreciation on the distribution system or any part thereof shall be taken into account in calculation of the income-tax liability of the Distribution Business.

63.3 Interest on loan capital

63.3.1 The Distribution Licensee shall be allowed to recover the interest expense on all approved loans as at March 31, 2005, based on the approved interest rate and the repayment schedules of such loans in accordance with Regulation 62 above.

63.3.2 The Distribution Licensee shall be allowed to recover the interest rate on all loans taken for approved capital expenditure projects commenced on or after April 1, 2005, approved additions to fixed assets and approved purchases of fixed assets on or after such date based on the following terms and conditions:

- (a) The interest rate shall be as approved by the Commission in the investment plan;
- (b) The value base shall be the normative loan capital of such capital expenditure project / fixed asset;
- (c) The normative loan capital shall be assumed to be repaid in accordance with the normative repayment schedule as per Regulation 62 of these Regulations.

63.3.3 The provisions of the Statements on Accounting Standard (AS16): Borrowing Costs of the Institute of Chartered Accountants of India shall apply, to the extent not inconsistent with the provisions of these Regulations, in the determination of interest on loan capital.

63.3.4 The Commission shall allow taxes on interest, commitment charges, finance charges and any exchange rate difference arising from foreign currency borrowings, to the extent recognized as interest cost in the books of account of the Distribution Licensee.

63.4 Depreciation, including advance against depreciation

63.4.1 The Distribution Licensee shall be permitted to recover depreciation on the value of fixed assets used in the Distribution Business computed in the following manner:

- (a) The approved original cost of such project/ fixed assets shall be the value base for calculation of depreciation;
- (b) Depreciation shall be computed annually based on the straight line method at the rates specified in the Annexure to these Regulations:

Provided that the residual value of the asset shall be considered at 10 per cent of the allowable capital cost and depreciation shall be allowed upto a maximum of 90 per cent of the allowable capital cost of the asset:

Provided further that depreciation shall not be permitted on land and the value of land shall be excluded from the allowable capital cost for the purpose of calculation of depreciation:

Provided that the provisions of the Statements of Accounting Standard (AS 6): Depreciation Accounting shall apply, to the extent not inconsistent with these Regulations, in calculating depreciation under these Regulations.

63.4.2 In addition to depreciation, the Distribution Licensee shall be entitled to Advance against Depreciation, computed in accordance with Regulation 62.3 above:

63.4.3 The Distribution Licensee shall be permitted to recover amortisation of intangible assets upto such level as may be approved by the Commission.

Explanation – for the purpose of this Regulation, the term “intangible assets” shall mean such pre-operative and promotional expenditure incurred in cash and shown as a debit in the capital account of the Distribution Licensee as has fairly arisen in promoting the Distribution Business and shall exclude any amount paid or otherwise accounted as goodwill.

### 63.5 Operation and Maintenance expenses

63.5.1 The Distribution Licensee shall be permitted to recover all reasonable and justifiable operation and maintenance expenses relating to the Distribution Business:

Provided that the Distribution Licensee shall submit a forecast of all such operation and maintenance expenses along with the application for determination of tariff:

Provided further that such forecast shall be based on past performance and/ or operating norms and shall be supported by detailed calculations that explain the basis for such forecast.

Explanation – for the purpose of this Regulation, “operation and maintenance expenses” shall include the following:

- (a) employee costs, including bonus and contributions to provident fund, staff pension and gratuity computed under any law for the time being in force or any scheme approved by the Commission;
- (b) repairs and maintenance;
- (c) rent, rates and taxes, other than income-tax;
- (d) legal charges;
- (e) provisions for doubtful debts;
- (f) auditors’ fees;
- (g) expenses on apprentice and training schemes;
- (h) any other expense not covered above or elsewhere in these Regulations, relating to the Distribution Business that is allowable as a deduction in the calculation of income under the Income-tax Act, 1961.

63.6 Interest on working capital

63.6.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:

- (a) One-twelfth of the amount of Operation and Maintenance expenses for such financial year; plus
- (b) One-twelfth of the sum of the book value of stores, materials and supplies including fuel on hand at the end of each month of such financial year; plus
- (c) Two months equivalent of the expected revenue from wheeling charges at the prevailing tariffs; minus
- (d) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from consumers and Distribution System Users.

63.6.2 Interest shall be allowed at a rate equal to the Short Term Prime Lending Rate of the State Bank of India as at the date on which the application for determination of tariff is made.

63.6.3 Interest shall be allowed on the amount held as security deposit from Distribution System Users at the Bank Rate as at the date on which the application for determination of tariff is made.

63.7 Contribution to contingency reserves

63.7.1 Where the Distribution Licensee has made an appropriation to Contingencies Reserve, a sum not less than 0.25 per cent and not more than 0.5 per cent of the original cost of fixed assets shall be allowed towards such appropriation in the calculation of wheeling charges:

Provided that where the amount of such Contingencies Reserves exceeds five (5) per cent of the original cost of fixed assets, no appropriation shall be made which would have the effect of increasing the reserve beyond the said maximum:

Provided further that the amount so appropriated shall be invested in securities authorized under the Indian Trusts Act, 1882 within a period of six months of the close of the financial year.

63.7.2 The Contingency Reserve shall not be drawn upon during the term of the licence except to meet such charges as may be approved by the Commission as being:

- (a) Expenses or loss of profits arising out of accidents, strikes or circumstances which the management could not have prevented;
- (b) Expenses on replacement or removal of plant or works other than expenses requisite for normal maintenance or renewal;
- (c) Compensation payable under any law for the time being in force and for which no other provision is made:

Provided that such drawal from Contingency Reserve shall be computed after making due adjustments for any other compensation that may have been received by the Licensee as part of an insurance cover.

## **64 Non-Tariff Income**

- 64.1 The amount of non-tariff income relating to the Distribution Business as approved by the Commission shall be deducted from the aggregate revenue requirement in determining the wheeling charges of the Distribution Licensee:

Provided that the Distribution Licensee shall submit full details of his forecast of non-tariff income to the Commission along with his application for determination of tariff.

## **65 Income from Other Business**

- 65.1 Where the Distribution Licensee has engaged in any Other Business, an amount equal to one-third of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the aggregate revenue requirement in determining the wheeling charges of the Distribution Licensee:

Provided that the Distribution Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Distribution Business and the Other Business and shall submit the Allocation Statement to the Commission along with his application for determination of tariff:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceed the revenues from such Other Business or for any other reason, no amount shall be allowed to be added to the aggregate revenue requirement of the Distribution Licensee on account of such Other Business.

## **66 Allocation of wheeling charges**

- 66.1 The Commission shall specify the wheeling charges of the Distribution Licensee in its Order passed under sub-section (3) of Section 64 of the Act:

Provided that the charges payable by a Distribution System User under this Part G may comprise any combination of fixed charges and variable charges, as may be specified by the Commission in such Order.

## **67 Distribution losses**

- 67.1 The Distribution Licensee shall be allowed to recover, in kind, the approved level of energy losses arising from the operation of the distribution system:

Provided that the Commission may stipulate a trajectory for distribution losses in accordance with Regulation 16 as part of the multi-year tariff framework applicable to the Distribution Licensee:

Provided that any variation between the actual level of distribution losses and the approved level shall be dealt with, as part of the ongoing performance review, in accordance with the mechanisms provided in Regulation 18 or Regulation 19, as the case may be:

Provided also that the Commission may stipulate a time period beyond which Distribution Licensee shall not be permitted to recover, under this Regulation, energy losses arising from theft, pilferage, failure to meter or bill for electricity transmitted.

## **PART H: RETAIL SALE OF ELECTRICITY**

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### **68 Applicability**

68.1 These Regulations shall apply for determination of tariff for retail sale of electricity by a Distribution Licensee to his consumers:

Provided that in case of distribution of electricity in the same area by two or more Distribution Licensees, the Commission may fix the maximum ceiling of tariff for retail sale of electricity and may be guided by principles contained in these regulations in fixing such tariff.

### **69 Components of tariff**

69.1 The retail supply tariff of a Distribution Licensee shall provide for recovery of the aggregate revenue requirement of the Distribution Licensee for the financial year, as reduced by the amount of non-tariff income, income from wheeling, income from Other Business and receipts on account of cross-subsidy surcharge and additional surcharge, as approved by the Commission and comprising the following: -

Aggregate revenue requirement:

- (a) Return on equity capital;
- (b) Income-tax;
- (c) Interest on loan capital;
- (d) Depreciation, including advance against depreciation and amortisation of intangible assets;
- (e) Cost of power generation / power purchase;
- (f) Transmission charges;
- (g) Operation and Maintenance expenses;
- (h) Interest on working capital and on consumer security deposits; and
- (i) Contribution to contingency reserves

Revenue requirement from sale of electricity = Aggregate revenue requirement, as above, minus:

- (j) Non-tariff income;
- (k) Income from wheeling of electricity;
- (l) Income from Other Business, to extent specified in these Regulations;
- (m) Receipts on account of cross-subsidy surcharge; and
- (n) Receipts on account of additional surcharge on charges of wheeling.

- 69.2 The retail supply tariff of the Distribution Licensee shall be determined by the Commission on the basis of an application for determination of tariff made by the Distribution Licensee in accordance with Part B of these Regulations.

## **70 Multi-year tariffs**

- 70.1 Except where exempted by the Commission, the regulations contained in **Part C** of these Regulations shall apply to all Distribution Licensees in the State with effect from April 1, 2006.

## **71 Investment plan**

- 71.1 The Distribution Licensee shall submit an investment plan with full details of his proposed capital expenditure projects to the Commission for approval, either along with the application for determination of tariff or separately, at such time as may be directed by the Commission:

Provided that the investment plan shall be an annual rolling plan and the period covered by the plan shall coincide with the period for which forecasts/ estimates are being submitted as part of such application.

- 71.2 The investment plan shall be a least cost plan for undertaking investments in strengthening and augmentation of the distribution system and investments in the Retail Supply Business of the Distribution Licensee.
- 71.3 The investment plan shall cover all capital expenditure projects of a value exceeding Rs. Ten (10) crores and shall be in such form as may be stipulated by the Commission from time to time.
- 71.4 The investment plan shall be accompanied by such information, particulars and documents as may be required showing the need for the proposed investments, alternatives considered, cost/ benefit analysis and other aspects that may have a bearing on tariffs for retail sale of electricity.
- 71.5 The Commission shall review the investment plan submitted by the Distribution Licensee taking into consideration the prudence of the proposed expenditure and estimated impact on tariff and thereafter, shall either-
- (a) give an in-principle approval to the investment plan submitted by the Distribution Licensee, with such modifications or conditions as the Commission deems appropriate; or
  - (b) reject the investment plan submitted by the Distribution Licensee and require the Distribution Licensee to submit a fresh investment plan taking into consideration such factors as the Commission may deem necessary.
- 71.6 The Distribution Licensee shall submit, along with the application for determination of tariff or along with the application for annual performance review, as the case may be, details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require to assess such progress.

## **72 Capital cost**

- 72.1 The approved investment plan of the Distribution Licensee shall be the basis for determining the annual allowable capital cost for each financial year for any capital expenditure project initiated on or after April 1, 2005 with a value exceeding Rs. Ten (10) crores.
- 72.2 For each capital expenditure project, the sum total of annual allowable capital cost from the date of commencement of such project till the date of commissioning shall be the original cost of such project:
- Provided that the Commission may permit additional costs, which are in the nature of capital expenditure, to be included in the original cost of the project beyond the date of commissioning, upon application for the same made by the Distribution Licensee.
- 72.3 Where the actual cost incurred on a capital expenditure project exceeds the estimate of original cost approved as part of the investment plan or where the Distribution Licensee has reasonable grounds to believe that the actual cost will exceed such approved estimate, then the Distribution Licensee shall apply to the Commission for approval for variation in the estimate of original cost of the project, as part of the annual performance review:
- Provided that the Commission shall, after due scrutiny, permit such increase to be dealt with in the manner provided in Regulation 18 above if it is satisfied that the increase is reasonable and has arisen due to uncontrollable factors.
- 72.4 Where the actual cost incurred on a capital expenditure project is lower than the approved estimate of original cost and such savings in capital cost is on account of controllable factors, the Commission shall, after due scrutiny, permit the resultant savings in interest on loan capital during the construction period on such project to be dealt with in the manner provided in Regulation 19 above:
- Provided that where the savings in capital cost is due to uncontrollable factors, it shall be dealt with in the manner provided in Regulation 18 above.
- 72.5 Notwithstanding anything contained in this Regulation 72, for any capital expenditure project with a value not exceeding Rs. Ten (10) crores, the actual cost as recorded in the books of account of the Distribution Licensee shall be the basis for determining the annual allowable capital cost and the original cost of the project, subject to prudence check by the Commission.
- 72.6 Notwithstanding anything contained in this Regulation 72, for any capital expenditure project approved before April 1, 2005, the actual cost as recorded in the books of account of the Distribution Licensee shall be the basis for determining the annual allowable capital cost and the original cost of the project, subject to prudence check by the Commission.
- 72.7 The provisions of the Statements of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India shall apply, to the extent not inconsistent with these Regulations, in determining the original cost of capital expenditure projects and/ or original cost of fixed assets capitalized.

- 72.8 The annual allowable capital cost shall be assumed to have been evenly incurred during such financial year, for the purpose of these Regulations.
- 72.9 An additional amount of 1.5 per cent of the original cost of project shall be permitted to be included in the original cost of project on account of capitalized initial spares.
- 72.10 The impact of any foreign exchange rate variation on a foreign currency loan taken to finance a capital expenditure project shall be treated in accordance with the Statements of Accounting Standard (AS11): Accounting for the Effects of Changes in Foreign Exchange Rates of the Institute of Chartered Accountants of India.

Provided that the actual or normative loan capital determined as per Regulations 73 and 74 of these Regulations shall be considered for inclusion in the above.

- 72.11 The amount of any contributions made by consumers and Distribution System Users towards works for connection to the distribution system of the Distribution Licensee shall be deducted from the original cost for such project for the purpose of calculating the amount of loan capital and equity capital under these Regulations:

Provided that for the purpose of depreciation under Regulation 76.4 below, the original cost of project before deduction of any such contributions shall be taken into account.

### **73 Debt-equity ratio**

- 73.1 Any capital expenditure incurred during a financial year on a capital expenditure project commenced on or after April 1, 2005 and/ or on purchase of fixed asset on or after such date shall be assumed to be financed at a normative debt:equity ratio of 70:30, to be applied on the annual allowable capital cost for such year.
- 73.2 Any fixed asset capitalized on account of a capital expenditure project commenced on or after April 1, 2005 or on account of fixed asset purchased on or after such date shall be assumed to have been financed at a normative debt:equity ratio of 70:30 to be applied on the original cost of such project/ fixed asset.
- 73.3 Any approved change in the original cost of a project/ fixed asset after the date of commissioning shall be assumed to have been financed at the normative debt:equity ratio.
- 73.4 Where the Distribution Licensee has achieved financial closure prior to the date of notification of these Regulations in respect of a capital expenditure project commenced on or after April 1, 2005 with a debt:equity ratio less than 70:30, he may apply to the Commission for exemption from Regulation 73.1 along with reasons therefor:

Provided further that the Commission may exempt such capital expenditure project from the normative debt:equity ratio if it believes that the application of Regulation 73.1 is likely to adversely affect the commissioning schedule of such project and thereby, the cost and quantity of electricity supplied to consumers.

- 73.5 The Commission may, if it deems appropriate, allow a relaxation in the debt:equity ratio norm specified in this Regulation 73 where the applicant reasonably demonstrates inability to raise loan capital, up to the stipulated norm, due to market constraints, corporate / group exposure norms of lenders or similar factors:

Provided that the Commission shall give any interested or affected party the opportunity to make representations before approving a relaxation in the debt:equity ratio norm under this Regulation 73.5.

#### **74 Loan repayment schedule**

- 74.1 The repayment schedule for all approved loans of the Distribution Licensee as at March 31, 2005 shall be in accordance with the loan agreements:

Provided that where any new loan (or additional tranche of existing loan) is taken on or after April 1, 2005 in respect of an approved capital expenditure project commenced (but not commissioned) prior to April 1, 2005, then any such loan taken till the date of commissioning of the project shall be treated as an existing loan for the purpose of recovery of interest expense under these Regulations.

- 74.2 The loan capital calculated using the normative debt:equity ratio under Regulation 73 above shall be assumed to be repaid each year based on a normative repayment schedule:

Provided that the amount of such normative repayment for a year shall be equal to the amount of depreciation on the fixed asset to which such loan relates:

Provided further that where the outstanding normative loan balance is less than the amount of normative loan repayment calculated as above, the repayment shall be assumed to be equal to the outstanding normative loan balance and no further amount shall be permitted on account of such loan:

Provided also that all normative repayments are assumed to be made on September 30<sup>th</sup> of each financial year.

- 74.3 Where the actual amount of loan repayment in any financial year exceeds the amount of depreciation allowable under Regulation 76.4.1, the Distribution Licensee shall be allowed an advance against depreciation for the difference between the actual amount of such repayment and the allowable depreciation for such financial year:

Provided that the advance against depreciation shall be restricted to 1/10<sup>th</sup> of the principal amount of loans that are to be repaid in such financial year minus the amount of depreciation allowable under Regulation 76.4.1:

Provided also that the amount of loan repayment, calculated in accordance with Regulation 74.1 and Regulation 74.2 above shall be assumed to be increased by the amount of such advance against depreciation allowed to the Distribution Licensee:

Provided also that upon repayment of the entire loan amount, the original cost of the fixed asset shall be reduced by the amount of accumulated depreciation and by the total amount of advance against depreciation availed by the Distribution Licensee and the resulting depreciable value shall be spread over the balance useful life of the fixed asset.

## **75 Sales forecast**

75.1 The Distribution Licensee shall submit a monthly forecast of the expected sales of electricity to each tariff category and to each tariff slab within such tariff category to the Commission for approval along with the application for determination of tariff:

Provided that the period covered by such sales forecast shall coincide with the period for which forecasts/ estimates are being submitted as part of such application.

75.2 The sales forecast shall be consistent with the load forecast prepared as part of the long-term power procurement plan under **Part D** of these Regulations and shall be based on past data and reasonable assumptions regarding the future:

Provided that where the Commission has stipulated a methodology for forecasting sales to any particular tariff category, the Distribution Licensee shall incorporate such methodology in developing the sales forecast for such tariff category.

75.3 The Commission shall review the sales forecast for reasonableness and, upon completion of such review, either-

- (a) issue an Order approving such forecast with such modifications or conditions as may be specified in the said Order; or
- (b) reject the forecast and ask the Distribution Licensee to submit a revised forecast taking into consideration such factors as it may specify.

## **76 Calculation of aggregate revenue requirement**

76.1 Return on equity capital

76.1.1 The Distribution Licensee shall be allowed a return at the rate of 16 per cent per annum, in Indian Rupee terms, on the amount of approved equity capital:

Explanation I – for the purpose of this Regulation, equity capital shall be the sum total of paid-up equity capital, preference share capital, fully / compulsorily convertible debentures (or other financial instrument with equivalent characteristics), foreign currency convertible bonds, share premium account and any reserves, available for distribution as dividend or for capitalization by way of issue of bonus shares, which have been invested in the Distribution Business and in the Retail Supply Business. The amount of any grant, revaluation reserve, development reserve, contingency reserve and contributions from consumers / users shall not be included in the equity capital. The amount reflected in the books of account as deferred tax liability or deferred tax asset of the Distribution Business and the Retail Supply Business shall be added or deducted, as the case may be, from the amount of equity capital

Explanation II – for the purpose of this Regulation, the amount of equity capital as at April 1, 2005 shall be computed as follows:

Equity capital as at April 1, 2004 as determined by the Commission in accordance with Explanation I above, plus

Equity capital portion of the allowable capital cost, for the investments put to use in distribution business, calculated in accordance with Regulations 72 and 73 above, for the year ending March 31, 2005:

Provided that in case of a Distribution Licensee formed as a result of a transfer scheme under Section 131 of the Act, the date of the said transfer scheme shall be the effective date instead of April 1, 2004 for determination of equity capital above:

Provided further that in case of a local authority engaged, before the commencement of the Act, in the business of distribution of electricity, the opening balance of equity capital shall be stipulated appropriately by the Commission in its Order passed under sub-section (3) of Section 64 of the Act.

The amount of equity capital at the commencement of each financial year thereafter shall be computed as follows:

Equity capital as at the commencement of the previous financial year, calculated in accordance with these Regulations, plus

Equity capital portion of the allowable capital cost, for the investments put to use in distribution business, calculated in accordance with Regulations 72 and 73 above, for the previous financial year.

76.1.2 The return on equity capital shall be computed in the following manner:

- (a) Return at the allowable rate as per Regulation 76.1.1 above, applied on the amount of equity capital at the commencement of the financial year; plus
- (b) Return at the allowable rate as per Regulation 76.1.1 above, applied on 50 per cent of the equity capital portion of the annual allowable capital cost, for the investments put to use in distribution business, calculated in accordance with Regulation 72 and Regulation 73 above, for such financial year.

76.1.3 Any over-recovery or under-recovery of return on equity capital on account of variations in the annual allowable capital cost from the approved level shall be attributed to the same controllable or uncontrollable factors as have resulted in such capital cost variations.

76.2 Income-tax

76.2.1 Income-tax on the income of the Distribution Licensee shall be allowed for inclusion in the aggregate revenue requirement.

76.2.2 The Distribution Licensee shall include an estimate of his income-tax liability along with the application for determination of tariff, based on the provisions of the Income-Tax Act, 1961:

Provided that any change in such income-tax liability on account of assessment under the Income-tax Act, 1961 shall be dealt with as being on account of uncontrollable factors:

Provided further that any change in such income-tax liability on account of changes in the provisions of the Income-Tax Act, 1961 shall be dealt with as being on account of uncontrollable factors:

Provided further that any change in such income-tax liability on account of change in income of the Distribution Licensee from the approved forecast shall be attributed to the same controllable or uncontrollable factors as have resulted in the change in income and shall be dealt with accordingly.

76.2.3 The benefits of any income-tax holiday, credit for unabsorbed losses or unabsorbed depreciation on the distribution system or any part thereof shall be taken into account in calculation of the income-tax liability of the Distribution Licensee.

### 76.3 Interest on loan capital

76.3.1 The Distribution Licensee shall be allowed to recover the interest expense on all approved loans as at March 31, 2005, based on the approved interest rate and the repayment schedules of such loans, in accordance with Regulation 74 above.

76.3.2 The Distribution Licensee shall be allowed to recover the interest rate on all loans taken for approved capital expenditure projects commenced on or after April 1, 2005, approved additions to fixed assets and approved purchases of fixed assets on or after such date based on the following terms and conditions:

- (a) The interest rate shall as approved by the Commission in the investment plan;
- (b) The value base shall be the normative loan capital of such capital expenditure project / fixed asset purchased;
- (c) The normative loan capital shall be assumed to be repaid in accordance with the normative repayment schedule as per Regulation 74 of these Regulations.

76.3.3 The provisions of the Statements on Accounting Standard (AS16): Borrowing Costs of the Institute of Chartered Accountants of India shall apply, to the extent not inconsistent with the provisions of these Regulations, in the determination of interest on loan capital.

76.3.4 The Commission shall allow taxes on interest, commitment charges, finance charges and any exchange rate difference arising from foreign currency borrowings, to the extent recognized as interest cost in the books of account of the Distribution Licensee.

76.4 Depreciation, including Advance Against Depreciation

76.4.1 The Distribution Licensee shall be permitted to recover depreciation on the value of fixed assets used in the Distribution Business computed in the following manner:

- (a) The approved original cost of such fixed assets shall be the value base for calculation of depreciation;
- (b) Depreciation shall be computed annually based on the straight line method at the rates specified in the Annexure to these Regulations:

Provided that the residual value of the asset shall be considered at 10 per cent of the allowable capital cost and depreciation shall be allowed upto a maximum of 90 per cent of the allowable capital cost of the asset:

Provided further that depreciation shall not be permitted on land and the value of land shall be excluded from the allowable capital cost for the purpose of calculation of depreciation:

Provided that the provisions of the Statements of Accounting Standard (AS 6): Depreciation Accounting shall apply, to the extent not inconsistent with these Regulations, in calculating depreciation under these Regulations.

76.4.2 In addition to depreciation, the Distribution Licensee shall be entitled to Advance against Depreciation, computed in accordance with Regulation 74.3 above.

76.4.3 The Distribution Licensee shall be permitted to recover amortisation of intangible assets upto such level as may be approved by the Commission.

Explanation – for the purpose of this Regulation, the term “intangible assets” shall mean such pre-operative and promotional expenditure incurred in cash and shown as a debit in the capital account of the Distribution Licensee as has fairly arisen in promoting the Distribution Business / Retail Supply Business and shall exclude any amount paid or otherwise accounted as goodwill.

76.5 Cost of power generation/ power purchases

76.5.1 The Distribution Licensee shall be allowed to recover the cost of power generated by the Generation Business or purchased from external sources for supply to consumers based on the annual power procurement plan of the Distribution Licensee.

76.5.2 The power procurement plan shall be prepared based on the sales forecast and taking into consideration the approved level of transmission losses, in accordance with Regulation 54 and approved level of distribution losses, in accordance with Regulation 81 below.

76.5.3 The power procurement plan shall be consistent with the long-term power procurement plan of the Distribution Licensee with regard to power generation and purchases from long-term sources of supply.

76.5.4 Where any short-term power procurement is intended, it shall be in accordance with the regulations contained in Part D of these Regulations.

76.5.5 The Commission shall determine the quantum of electricity to be procured from various sources of supply, including the Generation Business of the Distribution Licensee, in accordance with the principle of merit order schedule and dispatch, based on a ranking of all approved sources of supply in the order of variable cost or price.

76.5.6 The Distribution Licensee may be entitled to receive or shall be required to bear, as the case may be, the charges for deviations between scheduled energy drawal and actual energy drawal, in accordance with the Balancing and Settlement Code, as may be published by the State Load Despatch Centre and approved by the Commission:

Provided that the extent of inclusion of such charges in computation of aggregate revenue requirement for the Distribution Licensee shall be stipulated by the Commission.

#### 76.6 Transmission charges

76.6.1 The Distribution Licensee shall be allowed to recover transmission charges payable to a Transmission Licensee for access to and use of the intra-State transmission system of such Transmission Licensee in accordance with the tariff approved by the Commission under Part F of these Regulations.

76.6.2 The Distribution Licensee shall also be allowed to recover the following expenses, at the approved level:

- (a) charges for use of intervening transmission facilities;
- (b) wheeling charges for use of the distribution system of other Distribution Licensee;
- (c) charges for access to and use of an inter-State transmission system, in accordance with tariffs specified by the Central Commission; and
- (d) fees and charges of the Regional Load Despatch Centre and State Load Despatch Centre, as may be specified

#### 76.7 Operation and Maintenance expenses

76.7.1 The Distribution Licensee shall be permitted to recover all reasonable and justifiable operation and maintenance expenses relating to the Distribution Business and Retail Supply Business:

Provided that the Distribution Licensee shall submit a forecast of all such operation and maintenance expenses along with the application for determination of tariff:

Provided further that such forecast shall be based on past performance and/or operating norms and shall be supported by detailed calculations that explain the basis for such forecast.

Explanation – for the purpose of this Regulation, “operation and maintenance expenses” shall include the following:

- (a) employee costs, including bonus and contributions to provident fund, staff pension and gratuity computed under any law for the time being in force or any scheme approved by the Commission;
- (b) repairs and maintenance;
- (c) rent, rates and taxes, other than income-tax;
- (d) legal charges;
- (e) provisions for doubtful debts;
- (f) auditors’ fees;
- (g) expenses on apprentice and training schemes;
- (h) any other expense not covered above or elsewhere in these Regulations, relating to the Distribution Business / Retail Supply Business that is allowable as a deduction in the calculation of income under the Income-tax Act, 1961.

76.8 Interest on working capital

76.8.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:

- (a) One-twelfth of the amount of Operation and Maintenance expenses for such financial year; plus
- (b) One-twelfth of the sum of the book value of stores, materials and supplies including fuel on hand at the end of each month of such financial year; plus
- (c) Two months equivalent of the expected revenue from sale of electricity at the prevailing tariffs; minus
- (d) Amount held as security deposits under clause (a) and clause (b) of subsection (1) of Section 47 of the Act from consumers and Distribution System Users; minus
- (e) One month equivalent of cost of power purchased, based on the annual power procurement plan.

76.8.2 Interest shall be allowed at a rate equal to the Short Term Prime Lending Rate of the State Bank of India as at the date on which the application for determination of tariff is made.

76.8.3 Interest shall be allowed on the amount held as security deposit from Distribution System Users and consumers at the Bank Rate as at the date on which the application for determination of tariff is made.

76.9 Contribution to contingency reserves

76.9.1 Where the Distribution Licensee has made an appropriation to Contingencies Reserve, a sum not less than 0.25 per cent and not more than 0.5 per cent of the original cost of fixed assets shall be allowed towards such appropriation in the calculation of aggregate revenue requirement:

Provided that where the amount of such Contingencies Reserves exceeds five (5) per cent of the original cost of fixed assets, no appropriation shall be made which would have the effect of increasing the reserve beyond the said maximum:

Provided further that the amount so appropriated shall be invested in securities authorized under the Indian Trusts Act, 1882 within a period of six months of the close of the financial year.

76.9.2 The Contingency Reserve shall not be drawn upon during the term of the licence except to meet such charges as may be approved by the Commission as being:

- (a) Expenses or loss of profits arising out of accidents, strikes or circumstances which the management could not have prevented;
- (b) Expenses on replacement or removal of plant or works other than expenses requisite for normal maintenance or renewal;
- (c) Compensation payable under any law for the time being in force and for which no other provision is made:

Provided that such drawal from Contingency Reserve shall be computed after making due adjustments for any other compensation that may have been received by the Licensee as part of an insurance cover.

**77 Non-Tariff Income**

77.1 The amount of non-tariff income relating to the Distribution Business and/or the Retail Supply Business as approved by the Commission shall be deducted from the aggregate revenue requirement in calculating the revenue requirement from retail sale of electricity of the Distribution Licensee:

Provided that the Distribution Licensee shall submit full details of his forecast of non-tariff income to the Commission along with his application for determination of tariff.

**78 Income from wheeling charges**

78.1 The amount of any income from wheeling charges, calculated in accordance with Part G of these Regulations, as approved by the Commission, shall be deducted from the aggregate revenue requirement in calculating the revenue requirement from retail sale of electricity of the Distribution Licensee.

**79 Income from Other Business**

79.1 Where the Distribution Licensee has engaged in any Other Business, an amount equal to one-third of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the aggregate revenue requirement in calculating the revenue requirement from retail sale of electricity of the Distribution Licensee:

Provided that the Distribution Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Distribution Business and the Other Business and shall submit the Allocation Statement to the Commission along with his application for determination of tariff:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceed the revenues from such Other Business or for any other reason, no amount shall be allowed to be added to the aggregate revenue requirement of the Distribution Licensee on account of such Other Business.

Provide also that nothing contained in this Regulation shall apply to a local authority engaged, before the commencement of the Act, in the business of distribution of electricity.

## **80 Receipts on account of cross-subsidy surcharge and additional surcharge on charges of wheeling**

80.1 The amount received by the Distribution Licensee from a Generating Company or Licensee giving supply of electricity within the area of supply of the Distribution Licensee by way of cross-subsidy surcharge, as approved by the Commission in accordance with the Distribution Open Access Regulations shall be deducted from the aggregate revenue requirement in calculating the revenue requirement from retail sale of electricity of such Distribution Licensee.

80.2 The amount received by the Distribution Licensee by way of additional surcharge on charges of wheeling, from consumers of such Distribution Licensee who have chosen to receive supply of electricity from a Generating Company or Licensee other than such Distribution Licensee, as approved by the Commission in accordance with the Distribution Open Access Regulations shall be deducted from the aggregate revenue requirement in calculating the revenue requirement from retail sale of electricity of such Distribution Licensee.

## **81 Distribution losses**

81.1 The Distribution Licensee shall be allowed to recover the approved level of energy losses arising from the Retail Supply Business:

Provided that the Commission may stipulate a trajectory for distribution losses in accordance with Regulation 16 as part of the multi-year tariff framework applicable to the Distribution Licensee:

Provided further that any variation between the actual level of distribution losses and the approved level shall be dealt with, as part of the annual performance review, in accordance with the mechanisms provided in Regulation 18 or Regulation 19, as the case may be:

Provided also that the Commission may stipulate a time period beyond which Distribution Licensee shall not be permitted to recover, under this Regulation, energy losses arising from theft, pilferage, failure to meter or bill for electricity transmitted.

## 82 Fuel surcharge adjustment

- 82.1 With effect from the first day of September, 2005, the Distribution Licensee shall pass on adjustments, due to changes in the cost of power generation and power procured due to changes in fuel cost, through the Fuel Adjustment Cost (FAC) formula, as specified below.
- 82.2 The FAC charge shall be applicable on the entire sale of the Distribution Licensee without any exemption to any consumer.
- 82.3 The FAC charge shall be computed and charged on the basis of actual variation in fuel costs relating to power generated from own generation stations and power procured during any month subsequent to such costs being incurred, in accordance with these Regulations, and shall not be computed on the basis of estimated or expected variations in fuel costs.
- 82.4 The Distribution Licensee shall submit details in the stipulated format to the Commission on a quarterly basis for the FAC charged and, for this purpose, shall submit such details of the FAC incurred and the FAC charged to all consumers for each month in such quarter, along with the detailed computations and supporting documents as may be required for verification by the Commission:

Provided that where the FAC is being charged for the first time subsequent to the notification of these Regulations, the Distribution Licensee shall obtain the approval of the Commission prior to levying the FAC charge:

Provided further that the FAC charge applicable to each tariff category of consumers shall be displayed prominently at the cash collection centres and on the internet website of the Distribution Licensee:

Provided that the Distribution Licensee shall put up on his internet website such details of the FAC incurred and the FAC charged to all consumers for each month along with detailed computations.

- 82.5 The formula for the calculation of the FAC shall be as given under:

$$\begin{aligned} \text{FAC (Rs crores)} &= \mathbf{C} + \mathbf{I} + \mathbf{B}, \text{ Where} \\ \text{FAC} &= \text{Fuel Adjustment Cost} \\ \mathbf{C} &= \text{Change in cost of own generation and power purchase due to variation in the fuel cost} \\ \mathbf{I} &= \text{Interest on working capital} \\ \mathbf{B} &= \text{Adjustment factor for over-recovery / under-recovery} \end{aligned}$$

Explanation I – for the purpose of this Regulation 82.5, the term “C” shall be computed in accordance with the following formula:

$$C (\text{Rs. Crores}) = A_{\text{FC,Gen}} + A_{\text{FC,PP}}, \text{ Where:}$$

$A_{\text{FC,Gen}}$  : Change in fuel cost of own generation. This change would be computed based on the norms and directives of the Commission, including heat rate, auxiliary consumption, generation and power purchase mix, etc.

$A_{FC,PP}$  : Change in energy charges of power procured from other sources. This change would be allowed to the extent it satisfies the criteria prescribed in these Regulations and the prevailing tariff order, and subject to applicable norms.

Explanation II – for the purpose of this Regulation 82.5, the term “**T**” shall mean change in interest on working capital on account of change in fuel cost.

Explanation III – for the purpose of this Regulation 82.5, the term “**B**” shall be computed in accordance with the following formula:

$$B_{J-2} \text{ (Rs. Crores)} = A_{J-4} + R_{J-2}$$

Where:

$A_{J-4}$  : Incremental cost in month “J-4”.

$R_{J-2}$  : Incremental cost in month “J-4” actually recovered in month “J-2”.

82.6 The monthly FAC charge shall not exceed 10% of the variable component of tariff, or such other ceiling as may be stipulated by the Commission from time to time:

Provided that any excess in the FAC charge over the above ceiling shall be carried forward by the Distribution Licensee and shall be recovered over such future period as may be directed by the Commission.

82.7 The calculation for FAC to be charged for the month “J” shall be as follows:

$$FAC_J \text{ (Rs crores)} = C_{J-2} + I_{J-2} + B_{J-2}$$

The FAC would be applicable from the month following the month in which the additional costs are calculated.

82.8 The FAC charge shall be allowed only in respect of approved power purchases of the Distribution Licensee and in respect of power purchases made in accordance with Regulation 25 where the approval of the Commission is not required under these Regulations.

82.9 The total FAC recoverable, as per the formula specified above, shall be recovered from the actual sales in “Rupees per kilowatt-hour” terms:

Provided that in case of unmetered consumers, FAC shall be recoverable based on estimated sales to such consumers, calculated in accordance with such methodology as may be stipulated by the Commission:

Provided further that where the actual distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of FAC corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total FAC recoverable.

82.10 Calculation of FAC per kWh shall be as per the following formula:

$$FAC_{Rs./kWh} = (FAC / (\text{Metered sales} + \text{Unmetered consumption estimates} + \text{Excess distribution losses})) * 10$$

## **PART I: GRANT OF SUBSIDIES BY STATE GOVERNMENT**

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### **83 Manner of provision of subsidy by State Government**

- 83.1 With effect from the first day of September, 2005, if the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the Commission, the State Government shall pay in advance the amount to compensate the Licensee/ person affected by the grant of subsidy in the manner specified in this Regulation, with prior approval of the Commission.
- 83.2 The amount of subsidy agreed to by the State Government shall be provided in the form of grant by the State Government.
- 83.3 The subsidy shall be passed on to eligible consumers only in proportion to the extent to which the total requirement of the Licensee is paid by the State Government.
- Provided that in case of shortfall in actual release of subsidy, either because of errors in estimation or for any other reason, such shortfall, shall be shown clearly in the consumers' bill and shall be distributed on a pro rata basis between the concerned eligible consumers until such time as it is reduced or eliminated.
- 83.4 The Licensee shall clearly indicate in the consumer's bill (a) the tariff determined by the Commission; (b) the amount of State Government subsidy and the rate and period thereof; (c) the net amount payable.

## **PART J: MISCELLANEOUS**

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### **84 Power to amend**

- 84.1 The Commission may, at anytime, vary, alter, modify or amend any provisions of these Regulations.

### **85 Power to remove difficulties**

- 85.1 If any difficulty arises in giving effect 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.

**Annexure I****DEPRECIATION SCHEDULE**

Description of Assets		Fair life (years)	Depreciation (Straight line)
A.	Land owned under full title	Infinity	--
B.	Land held under lease		
	a) for investment in the land	The period of lease or the period remaining unexpired on the assignment of the lease	
	b) for cost of clearing the site	The period of lease remaining unexpired at the date of clearing the site	--
C.	Assets Purchased New:		
	a. Plant and machinery in generating stations including plant foundations		
	i) Hydro-electric	35	2.57
	ii) Steam electric	25	3.60
	NHRS & Waste Heat Recovery Boilers/Plants		
	iii) Diesel-electric and gas plant	15	6.00
	b. Cooling towers and circulating water systems	25	3.60
	c. Hydraulic works forming part of Hydro-electric systems including:-		
	i) Dams, Spillways, weirs, canals, reinforced concrete Flumes and siphons	50	1.80
	ii) Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and other hydraulic works	35	2.57
	d. Building & civil engineering works of permanent character		
	i) Offices & showrooms	50	1.80
	ii) Containing thermo-electric generating plant	25	3.60
	iii) Containing hydro-electric generating plant	35	2.57
	iv) Temporary erection such as wooden structures	5	18.00

v)	Roads other than kutcha roads	50	1.80
vi)	Others	50	1.80
e.	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	25	3.60
ii)	Others	25	3.60
f.	Switchgear including cable connections	25	3.60
g.	Lightning arrestors		
i)	Station type	25	3.60
ii)	Pole type	15	6.00
iii)	Synchronous condensor	35	2.57
h.	Batteries	5	18.00
i)	Underground Cable including joint boxes and disconnected boxes	25	3.60
ii)	Cable duct system	50	1.80
i.	Overhead lines including supports:		
i)	Lines on fabricated steel operating at nominal voltages higher than 66 kV	35	2.57
ii)	Lines on steel supports operating at nominal voltages higher than 13.2 kilovolts but not exceeding 66 kilovolts	25	3.60
iii)	Lines on steel or reinforced concrete supports	25	3.60
iv)	Lines on treated wood supports	25	3.60
j.	Meters	15	6.00
k.	Self propelled vehicles	5	18.00
l.	Air conditioning plants:		
i)	Static	15	6.00
ii)	Portable	5	18.00
m.			
i)	Office furniture and fittings	15	6.00
ii)	Office equipments	15	6.00
iii)	Internal wiring including fittings and apparatus	15	6.00
iv)	Street light fittings	15	6.00

n.	Apparatus let on hire		
	i) Other than motors	5	18.00
	ii) Motors	15	6.00
o.	Communication equipment:		
	i) Radio and high frequency carrier system	15	6.00
	ii) Telephone lines and telephones	15	6.00
p.	Assets purchased second hand and assets not otherwise provided for in the Schedule	Such reasonable period as the Commission determines in each case having regard to the nature, age and condition of the assets at the time of its acquisition by the Generating Company/ Licensee	

**Procedure for calculation of Transmission System Availability**

1. Transmission System Availability shall be calculated separately for each Transmission System. The transmission elements shall be grouped into following categories for the purpose of calculation of availability of Transmission Systems :
  - i) AC transmission lines: Each circuit of AC transmission line shall be considered as one element.
  - ii) Inter-Connecting Transformers (ICTs): Each ICT bank (three single phase transformer together) shall form one element.
  - iii) Static VAR Compensator (SVC): SVC along with SVC transformer shall form one element. However, 50% credit to inductive and 50% to capacitive rating shall be given.
  - iv) Switched Bus Reactor: Each switched Bus Reactor shall be considered as one element.
  - v) HVDC Bi-pole links: Each pole of HVDC link along with associated equipment at both ends shall be considered as one element.
  - vi) HVDC back-to-back station: Each block of HVDC back-to-back station shall be considered as one element. If associated AC line (necessary for transfer of inter-regional power through HVDC back-to-back station) is not available, the HVDC back-to-back station block shall also be considered as unavailable.
2. The Availability of AC and HVDC portion of Transmission system shall be calculated as under:

% System Availability for AC system

$$= \frac{o \times AV_o + p \times AV_p + q \times AV_q + r \times AV_r}{o + p + q + r} \times 100$$

% System Availability for HVDC system

$$= \frac{s \times AV_s + t \times AV_t}{s + t} \times 100$$

Where

- |                 |    |  |
|-----------------|----|--|
| o               | is | Total number of AC lines.                          |
| AV <sub>o</sub> | is | Availability of o number of AC lines.              |
| p               | is | Total number of switched bus reactors .            |
| AV <sub>p</sub> | is | Availability of p number of switched bus reactors. |
| q               | is | Total number of ICTs.                              |
| AV <sub>q</sub> | is | Availability of q number of ICTs.                  |
| r               | is | Total number of SVCs.                              |
| AV <sub>r</sub> | is | Availability of r number of SVCs.                  |

s	is	Total number of HVDC poles
$AV_s$	is	Availability of s number of HVDC poles
t	is	Total number of HVDC back-to-back station blocks.
$AV_t$	is	Availability of t number of HVDC back-to-back station blocks

3. The weightage factor for each category of transmission elements shall be as under:
  - i) For each circuit of AC line – Surge Impedance Loading for Uncompensated line (SIL) multiplied by Circuit Km.
  - ii) SIL rating for various voltage level and conductor configuration is given in **Appendix-II** to this Annexure. However, for the voltage levels and/or conductor configurations not listed in **Appendix-II**, appropriate SIL based on technical considerations may be used for availability calculation under intimation to Transmission System Users.
  - iii) For each HVDC pole – The rated MW capacity x Circuit Km.
  - iv) For each ICT bank – The rated MVA capacity.
  - v) For SVC – The rated MVAR capacity (inductive & capacitive).
  - vi) For switched Bus reactor – The rated MVAR capacity.

For HVDC back-to-back station connecting two Transmission Systems – Rated MW capacity of each block.

4. The availability for each category of transmission elements shall be calculated based on the weightage factor, total hours under consideration and non-available hours for each element of that category. The formulae for calculation of Availability of each category of the Transmission elements are as per **Appendix-I** to this **Annexure - II**.
5. The transmission elements under outage due to following reasons not attributable to the transmission licensee shall be deemed to be available:
  - i) Shut down of transmission elements availed by other agency/agencies for maintenance or construction of their transmission system.
  - ii) Manual tripping of line due to over voltage and manual tripping of switched bus reactor as per the directions of SLDC.
6. Outage time of transmission elements for the following contingencies shall be excluded from the total time of the element under period of consideration.
  - i) Outage of elements due to acts of God and force majeure events beyond the control of the transmission licensee. However, onus of satisfying the Commission or any such other forum/agency as specified by the Commission that element outage was due to aforesaid events and not due to design failure shall rest on the transmission licensee. A reasonable restoration time for the element shall be allowed by Commission or any such other forum/agency as specified by the Commission and any additional time taken by the transmission licensee for

restoration of the element beyond the reasonable time shall be treated as outage time attributable to the transmission licensee. Commission or any such other forum/agency as specified by the Commission may consult the transmission licensee or any expert for estimation of restoration time. Circuits restored through ERS (Emergency Restoration System) shall be considered as available.

- ii) Outage caused by grid incident/disturbance not attributable to the transmission licensee, e.g. faults in substation or bays owned by other agency causing outage of the transmission licensee's elements, tripping of lines, ICTs, HVDC back-to-back stations etc. due to grid disturbance. However, if the element is not restored on receipt of direction from SLDC while normalising the system following grid incident/disturbance within reasonable time, the element will be considered not available for whole period of outage and outage time shall be attributable to the transmission licensee.
7. If the outage of any element causes loss of generation at a in-state generation stations then the outage period for that element shall be deemed to be twice the actual outage period for the day(s) on which such loss of generation has taken place.

**Formulae for calculation of Availability of each category of transmission elements**

$$AV_o(\text{Availability of } o \text{ no. of AC lines}) = \frac{\sum_{i=1}^o \frac{W_i(T_i - T_{NAi})}{T_i}}{\sum_{i=1}^o W_i}$$

$$AV_p(\text{Availability of } p \text{ no. of HVDC pole}) = \frac{\sum_{j=1}^p \frac{W_j(T_j - T_{NAj})}{T_j}}{\sum_{j=1}^p W_j}$$

$$AV_q(\text{Availability of } q \text{ no. of ICTs}) = \frac{\sum_{k=1}^q \frac{W_k(T_k - T_{NAk})}{T_k}}{\sum_{k=1}^q W_k}$$

$$AV_r(\text{Availability of } r \text{ no. of SVCs}) = \frac{\left[ \sum_{l=1}^r 0.5 \frac{W_{lI}(T_{lI} - T_{NAI})}{T_{lI}} + \sum_{l=1}^r 0.5 \frac{W_{lC}(T_{lC} - T_{NAC})}{T_{lC}} \right]}{\left[ \sum_{l=1}^r 0.5 W_{lI} + \sum_{l=1}^r 0.5 W_{lC} \right]}$$

$$AV_s(\text{Availability of } s \text{ no. of Switched Bus reactors}) = \frac{\sum_{m=1}^s \frac{W_m(T_m - T_{NAM})}{T_m}}{\sum_{m=1}^s W_m}$$

$$AV_t(\text{Availability of } t \text{ no. of HVDC Back-to-back Blocks}) = \frac{\sum_{n=1}^t \frac{W_n(T_n - T_{NAN})}{T_n}}{\sum_{n=1}^t W_n}$$

- Where  $W_i$  = Weightage factor for  $i^{\text{th}}$  transmission line  
 $W_j$  = Weightage factor for  $j^{\text{th}}$  HVDC pole  
 $W_k$  = Weightage factor for  $k^{\text{th}}$  ICT  
 $W_{lI}$  &  $W_{lC}$  = Weightage factors for inductive & capacitive operation of  $l^{\text{th}}$  SVC  
 $W_m$  = Weightage factor for  $m^{\text{th}}$  bus reactor  
 $W_n$  = Weightage factor for  $n^{\text{th}}$  HVDC back to back block.

$T_i, T_j, T_k, T_{lI}, T_{lC}, T_m$  &  $T_n$  The total hours of  $i^{\text{th}}$  AC line,  $j^{\text{th}}$  HVDC pole,  $k^{\text{th}}$  ICT,  $l^{\text{th}}$  SVC (Inductive Operation),  $l^{\text{th}}$  SVC (Capacitive Operation),  $m^{\text{th}}$  Switched Bus Reactor &  $n^{\text{th}}$  HVDC back-to-back block during the period under consideration (excluding time period for outages not attributable to transmission licensee for reasons given in Para 6 of the procedure)

$T_{NAi}, T_{NAj}, T_{NAk}, T_{NAI}, T_{NAC}, T_{NAM}$ , The non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability as per Para 5 of the procedure) for  $i^{\text{th}}$  AC line,  $j^{\text{th}}$  HVDC pole,  $k^{\text{th}}$  ICT,  $l^{\text{th}}$  SVC (Inductive Operation),  $l^{\text{th}}$  SVC (Capacitive Operation),  $m^{\text{th}}$  Switched Bus Reactor &  $n^{\text{th}}$  HVDC back-to-back block.

**APPENDIX – II**

**SURGE IMPEDANCE LOADING (SIL) OF AC LINES**

<b>S.No.</b>	<b>Line voltage (kv)</b>	<b>Conductor Configuration</b>	<b>SIL (MW)</b>
1	765	Quad Bersimis	2250
2	400	Quad Bersimis	691
3	400	Twin Moose	515
4	400	Twin AAAC	425
5	400	Quad Zebra	647
6	400	Quad AAAC	646
7	400	Tripple Snowbird	605
8	400	ACKC(500/26)	556
9	400	Twin ACAR	557
10	220	Twin Zebra	175
11	220	Single Zebra	132
12	132	Single Panther	50
13	66	Single Dog	10

Mumbai

Dated: 23<sup>rd</sup> August, 2005

**(A. M. Khan)**

Secretary,

Maharashtra Electricity Regulatory Commission