

**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
(MULTI YEAR TARIFF) REGULATIONS, 2010**

1	Short title, extent, applicability and commencement	5
2	Definitions	5
PART A: GENERAL		15
3	Scope of Regulation and extent of application	15
PART- B: GENERAL PRINCIPLES		15
4	Multi-year tariff framework	15
5	Control Period	16
6	Applicability	16
7	Business Plan	17
8	Forecast	17
9	Specific trajectory for certain variables	18
10	Mid-term Performance Review	18
11	Controllable and uncontrollable factors	20
12	Mechanism for pass through of gains or losses on account of uncontrollable factors	20
13	Mechanism for sharing of gains or losses on account of controllable factors	23
14	Alternative terms and conditions	24
PART- C: PROCEDURE FOR DETERMINATION OF TARIFF		24
15	Procedures relating to making an application for determination of Tariff	24
16	Determination of Generation Tariff	25
17	Determination of Tariff for Transmission, Distribution Wires Business and Retail Supply Business	26
18	Time limit for making an application for determination of Tariff	27
19	Tariff Order	28
20	Adherence to Tariff Order	28
PART D: ELECTRICITY PURCHASE AND PROCUREMENT		29
21	Applicability	29

22	Power procurement guidelines	29
23	Power procurement plan	29
24	Approval of power purchase agreement/arrangement	31
25	Additional Short-term power procurement	32
PART E: FINANCIAL PRINCIPLES		33
26	Capital Cost and capital structure	33
27	Additional capitalization	35
28	Consumer contribution, Deposit work and Grant	35
29	Return on Capital Employed	36
30	Depreciation	37
31	Interest on Working Capital	38
32	Adjustment to contingency reserves	41
PART F: GENERATION		42
33	Applicability	42
34	Petition for determination of generation tariff	42
35	Components of Tariff	43
36	Annual Fixed Charges	44
37	Capital cost	44
38	Sale of Infirm Power	47
39	Non Tariff Income	47
40	Norms of operation for Thermal Generating Stations	48
41	Operation and maintenance expenses	54
42	New Generating Stations:	55
43	Norms of operation for Hydro Generating Stations	56
44	Operation and Maintenance Expenses for Hydro Generating Stations	57
45	Computation and Payment of Annual Fixed Charges and Energy Charges for Thermal Generating Stations	58
46	Computation and Payment of Capacity Charges and Energy Charges for Hydro Generating Stations	60
47	Demonstration of declared capacity	62
48	Billing and Payment of Charges	62

PART G: TRANSMISSION	63
49	Applicability 63
50	Components of tariff 63
51	Multi-year tariffs 65
52	Financial Principles 65
53	Business Plan 65
54	Capital Investment Plan 66
55	Capital Cost 66
56	Norms for operation 67
57	Calculation of Aggregate Revenue Requirement 67
58	Non-Tariff Income 70
59	Income from Other Business 70
60	Determination of Intra-State Transmission Tariff 70
61	Sharing of TTSC by long term TSUs 73
62	Usage of Intra-State Transmission System 73
63	Payment Modalities and Payment Security 74
64	Transmission losses 74
65	Reactive Energy Charges 75
PART H: DISTRIBUTION WIRES BUSINESS	76
66	Separation of accounts 76
67	Applicability 76
69	Multi-Year Tariffs 77
70	Business Plan 77
71	Capital Investment Plan 77
72	Capital cost 77
73	Calculation of Aggregate Revenue Requirement 77
74	Non-Tariff Income 79
75	Income from Other Business 79
76	Determination of Wheeling Charges 79
77	Receipts on account of Additional surcharge 80
78	Wheeling losses 80

79	Wires Availability	80
PART I: RETAIL SUPPLY OF ELECTRICITY		82
80	Applicability	82
81	Components of Tariff	82
82	Multi-year tariffs	82
83	Business Plan	83
84	Capital Investment Plan	83
85	Capital Cost	83
86	Sales forecast	83
87	Calculation of Aggregate Revenue Requirement	84
88	Non-Tariff Income	85
89	Income from Other Business	86
90	Receipts on account of cross-subsidy surcharge	86
91	Distribution Losses	86
92	Supply Availability	86
PART J: GRANT OF SUBSIDIES BY STATE GOVERNMENT		87
93	Manner of provision of subsidy by State Government	87
PART K: MISCELLANEOUS		88
94	Power to amend	88
95	Power to remove difficulties	88
96	Repeal and savings	88

**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
(MULTI YEAR TARIFF) REGULATIONS 2010**

ELECTRICITY ACT, 2003.

No. [.....]- 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 sub-section (1) of 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) and all other powers enabling in that behalf, the Maharashtra Electricity Regulatory Commission hereby makes the following Regulations.

1 Short title, extent, applicability and commencement

- 1.1 These Regulations may be called the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2010.
- 1.2 These Regulations shall extend to the whole of the State of Maharashtra.
- 1.3
 - (a) These Regulations shall be applicable for determination of tariff in all cases covered under these Regulations from April 1, 2011 and onwards up to FY 2015-16 [i.e., till March 31, 2016].
 - (b) These Regulations shall be applicable to all the existing and future Generating Companies, Transmission Licensees and Distribution Licensees and their successors, if any..
- 1.4 These Regulations shall come into force from April 1, 2011.

2 Definitions

- 2.1 In these Regulations, unless the context otherwise requires:
 - (1) **“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 as amended from time to time;
 - (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.

Provided further that the Commission may, from time to time, specify regulatory accounts to be maintained by a local authority under the Act.

- (2) “**Act**” means the Electricity Act, 2003 (36 of 2003), as amended from time to time;
- (1) “**Allocation Statement**” means for each financial year, a statement in respect of each of the separate businesses of the Generating Company or Transmission Licensee or Distribution Licensee, based on allocation principles specified in Maharashtra Electricity Regulatory Commission (Uniform Recording, Maintenance and Reporting of Information) Regulations, 2009.
- (2) “**Applicant**” means a Generating Company or Transmission Licensee or Distribution Licensee who has made an application for determination of tariff or an application for Mid-term Performance Review in accordance with the Act and these Regulations and includes a Generating Company or Transmission Licensee or Distribution Licensee whose tariff is the subject of a review by the Commission either on suo-motu basis or on a petition filed by any interested or affected person or as part of a Mid-term Performance Review;
- (3) “**Aggregate Revenue Requirement**” means the requirement of the Transmission Licensee or Distribution Licensee for recovery, through tariffs, of allowable expenses and return on capital pertaining to its Licensed Business, in accordance with these Regulations;
- (4) “**Auxiliary Energy Consumption**” in relation to a period, means the quantum of energy consumed by auxiliary equipment of the generating station and shall be expressed as a percentage of the sum of gross energy generated at the generator terminals of all the units of the generating station;
Provided that for the purpose of these Regulations, auxiliary energy consumption for a thermal generating station shall include transformer losses within the generating station;
Provided further that colony consumption of a generating station shall not be included as part of the auxiliary consumption for the purpose of these Regulations.
- (5) “**Availability**” in relation to a thermal generating station for any period means the average of the daily average declared capacities as certified by Maharashtra State Load Despatch Centre (MSLDC) 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:

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

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

DC = Average Declared Capacity for the ith 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

- (6) **“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;
- (7) **“Balancing and Settlement Code”** refers to such code as may be stipulated by the Commission or as may be published by the Maharashtra State Load Despatch Centre and approved by the Commission, for the balancing of energy accounts and settlement of differences between contracted energy and actual energy among the users of the grid in the State of Maharashtra;
- (8) **“Beneficiary”** in relation to a generating station means the entity purchasing electricity generated at such a generating station whose tariff is determined under these regulations;
- (9) **“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;
- (10) **“Bulk Power Transmission Agreement”** means an executed Agreement that contains the terms and conditions under which a Transmission System User is entitled to access an intra-State transmission system of a Transmission Licensee;
- (11) **“Commission”** means the Maharashtra Electricity Regulatory Commission;
- (12) **“Conduct of Business Regulations”** means the Maharashtra Electricity Regulatory Commission (Conduct of Business) Regulations, 2004 as amended from time to time.
- (13) **“Contracted Capacity”** means the capacity in MW contracted by long-term Transmission System User as part of its long term power procurement plan through a power purchase agreement and shall be equivalent to the deemed Transmission Capacity Right of a Transmission System User as specified under Regulation 5.2 of

the MERC (Transmission Open Access) Regulations, 2005, as amended from time to time.

- (14) **“Control Period”** means the period comprising of five years from April 1, 2011 to March 31, 2016, and as may be extended by the Commission, for submission of forecast in accordance with Part C of these Regulations;
- (15) **“Cut-off Date”** means 31st March of the year closing after two years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of a year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation;
- (16) **“Day”** means the 24 hour period starting at 0000 hour;
- (17) **“Date of Commercial Operation”** means-
- a. in relation to a unit or block of a thermal generating station, the date declared by the generating company after demonstrating the maximum continuous rating (MCR) or the installed capacity (IC) through a successful trial run after notice to the beneficiaries, from 0000 hour of which scheduling process as per the Indian Electricity Grid Code (IEGC) is fully implemented
 - b. in relation to a unit of a hydro generating station, the date declared by the generating company from 0000 hour of which, after notice to the beneficiaries, scheduling process in accordance with the Indian Electricity Grid Code is fully implemented, and in relation to the generating station as a whole, the date declared by the generating company after demonstrating peaking capability corresponding to installed capacity of the generating station through a successful trial run, after notice to the beneficiaries:

Note

- i. In case the hydro generating station with pondage or storage is not able to demonstrate peaking capability corresponding to the installed capacity for the reasons of insufficient reservoir or pond level, the date of commercial operation of the last unit of the generating station shall be considered as the date of commercial operation of the generating station as a whole, provided that it will be mandatory for such hydro generating station to demonstrate peaking capability equivalent to installed capacity of the generating unit or the generating station as and when such reservoir/pond level is achieved.
- ii. In case of purely run-of-river hydro generating station, if the unit or the generating station is declared under commercial operation during lean inflows period when the water is not sufficient for such demonstration, it

shall be mandatory for such hydro generating station or unit to demonstrate peaking capability equivalent to installed capacity as and when sufficient inflow is available.

(18) **“Declared Capacity”** means-

- a. for a thermal generating station, the capability of the generating station to deliver ex-bus electricity in MW declared by such generating station in relation to any period of the day or whole of the day, duly taking into account the availability of fuel:

Provided that in case of a gas turbine generating station or a combined cycle generating station, the generating station shall declare the capacity for units and modules on gas fuel and liquid fuel separately, and these shall be scheduled separately. Total declared capacity and total scheduled generation for the generating station shall be the sum of the declared capacity and scheduled generation for gas fuel and liquid fuel for the purpose of computation of availability and Plant Load Factor, respectively;

- b. for hydro power generating stations, the ex-bus capacity in MW expected to be available from the generating station for the i^{th} day of the month, which the station can deliver for at least three (3) hours, as certified by the Maharashtra State Load Despatch Centre after the day is over, taking into account the availability of water;

(19) **“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;

(20) **“Distribution Business”** means the business of operating and maintaining a distribution system for supplying electricity in the area of supply of the Distribution Licensee;

(21) **“Distribution Wires Business”** means the business of operating and maintaining a distribution system for wheeling of electricity in the area of supply of the Distribution Licensee;

(22) **“Distribution Open Access Regulations”** means the Maharashtra Electricity Regulatory Commission (Distribution Open Access) Regulations, 2005 as amended from time to time;

(23) **“Expected Revenue from Tariff and Charges”** means the revenue estimated to accrue to the Generating Company or Transmission Licensee or Distribution Licensee from the Regulated Business at the prevailing tariffs;

- (24) **“Existing Generating Unit/Station”** means a generating unit/station declared under commercial operation prior to the date of effectiveness of these Regulations;
- (25) **“Event”** means an unscheduled or unplanned occurrence in the intra-State transmission system including faults, incidents and breakdowns
- (26) **“Fees and Charges Regulations”** means the “Maharashtra Electricity Regulatory Commission (Fees and Charges) Regulations, 2004” as amended from time to time.
- (27) **“Force Majeure Event”** means, with respect to any party, any event or circumstance, which is not within the reasonable control of, and is not due to an act of omission or commission of, that party and which, by the exercise of reasonable care and diligence, could not have been prevented, and without limiting the generality of the foregoing, would include the following events:
- a. acts of God, including but not limited to lightning, storm, action of the elements, earthquakes, flood, torrential rains, drought and natural disaster;
 - b. strikes, lockouts, go-slow, bandh or other industrial disturbances not instigated by any party;
 - c. acts of public enemy, wars (declared or undeclared), blockades, insurrections, riots, revolution, sabotage, vandalism and civil disturbance;
 - d. unavoidable accident, including but not limited to fire, explosion, radioactive contamination and toxic dangerous chemical contamination;
 - e. any shutdown or interruption of the grid, which is required or directed by the State or Central Government or by the Commission or the Maharashtra State Load Despatch Centre; and
 - f. any shut down or interruption, which is required to avoid serious and immediate risks of a significant plant or equipment failure;
- (28) **“Generation Business”** means the business of production of electricity from a generating station for the purpose of (i) giving supply to any premises or enabling a supply to be so given (ii) for the purpose of supply of electricity to any licensee in accordance with the Act and the rules and regulations made thereunder and, (iii) subject to the regulations made under sub-section (2) of Section 42 of the Act, supply of electricity to any consumer;
- (29) **“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 metre of gaseous fuel, as the case may be;
- (30) **“Gross Station Heat Rate”** means the heat energy input in kcal required to generate one kWh of electrical energy at generator terminals;

- (31) **“G-sec rate”** means the yield for Government of India Securities of 10 years maturity, as communicated by Reserve Bank of India for each completed financial year.
- (32) **“High Tension”** or **“HT”** means all voltages defined as “high” or “extra high” voltage under clause (av) of sub-rule (1) of Rule 2 of the Indian Electricity Rules, 1956 and corresponding voltage classifications as may be specified in accordance with clause (c) of sub-section (2) of Section 185 of the Act;
- (33) **‘Infirm power’** means electricity injected into the grid prior to the commercial operation of a Unit or Block of the generating station;
- (34) **“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;
- (35) **“Interconnection Point”** means a point at which a Transmission System User’s or Transmission Licensee’s Plant and/or Apparatus connects to the intra-State transmission system;
- (36) **“Intra-State Transmission System (InSTS)”** means any system for conveyance of electricity by transmission lines within the area of the State and includes all transmission lines, sub-stations and associated equipment of transmission licensees in the State:
Provided that the definition of point of separation between a transmission system and distribution system and between a Generating Station and transmission system shall be guided by the provision of the Regulations notified by the Authority under clause (b) of Section 73 of the Act;
- (37) **“Maximum Continuous Rating”** or **‘MCR’** in relation to a unit of the thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer at rated parameters, and in relation to a Block of a combined cycle thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer with water or steam injection (if applicable) and corrected to 50 Hz grid frequency and specified site conditions;
- (38) **“New Generating Unit/Station”** means a generating unit/station declared under commercial operation on or after the date of coming into force of these Regulations;
- (39) **“Normative Annual Plant Availability Factor”** or **“NAPAF”** in relation to a hydel generating station means the availability factor specified in Regulation 18 for hydro generating station;

(40) **“Non-Tariff Income”** means income relating to the regulated 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;

(41) **“Officer”** means an officer of the Commission;

(42) **“Operation and Maintenance expenses” or “O&M expenses” for a Generating Company** means the expenditure incurred on operation and maintenance of the project of a Generating Company, or part thereof, and includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads;

(43) **“Operation and Maintenance expenses” or “O&M expenses” of a Licensee** means the expenditure incurred on operation and maintenance by the Transmission Licensee or Distribution Licensee, or part thereof, and includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads;

(44) **“Original Project Cost”** means the capital expenditure incurred by the Generating Company or the Transmission Licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;

(45) **“Plant Availability Factor (PAF)”** in relation to a hydel generating station for any period means the average of the daily declared capacities (DCs) for all the days as certified by the Maharashtra State Load Despatch Centre during that period expressed as a percentage of the installed capacity in MW, reduced by the normative auxiliary energy consumption.

(46) **“Plant Load Factor (PLF)”**, in relation to a thermal generating station for a given period, means the total sent-out energy corresponding to actual 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:

$$\text{Plant Load Factor (\%)} = 10000 \times \frac{\sum_{i=1}^N AG_i}{\{ N \times IC \times (100 - AUX_n) \}} \%$$

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

AG = Actual Generation in MW for the ith 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

Provided actual generation for computation of Plant Load Factor should also include the generation loss on account of backing down instruction from the Maharashtra State Load Despatch Centre.

- (47) **“Project”** means a generating station or the transmission system, as the case may be, and in case of a hydro generating station includes all components of generating facility such as penstocks, head and tail works, main and regulating reservoirs dams and other hydraulic works, intake water conductor system, power generating station and generating units of the scheme, as apportioned to power generation;
- (48) **“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;
- (49) **“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;
- (50) **“Run-of-river generating station”** means a hydro generating station, which does not have upstream pondage;
- (51) **“Run-of-river generating station with pondage”** means a hydro generating station with sufficient pondage for meeting the diurnal variation of power demand;
- (52) **“Small gas turbine generating station”** means and includes open cycle gas turbine or combined cycle generating stations with gas turbines in the capacity range of 50 MW or below;
- (53) **“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;
- (54) **“Transmission System”** means a line or a group of lines with or without associated sub-station, and includes equipment associated with transmission lines and sub-stations;
- (55) **“Transmission Capacity Rights”** means the right of a Transmission System User to transfer power in MW, under normal circumstances, between such points of injection and drawal as may be set out in the Bulk Power Transmission Agreement;
- (56) **“Transmission Open Access Regulations”** means the Maharashtra Electricity Regulatory Commission (Transmission Open Access) Regulations, 2005 as amended from time to time;

- (57) **“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;
- (58) **“Unit”** in relation to a thermal generating station other than combined cycle thermal generating station means steam generator, turbine-generator and auxiliaries, or in relation to a combined cycle thermal generating station, means turbine-generator and auxiliaries; and in relation to a hydro generating station means turbine-generator and its auxiliaries;
- (59) **“Useful life”** in relation to a unit of a generating station, transmission system and distribution system, from the date of commercial operation, shall mean the following, namely:-
- i. Coal/Lignite based thermal generating - 25 years
 - ii. Gas/Liquid fuel based thermal generating station - 25 years
 - iii. Hydro generating station – 35 years
 - iv. AC and DC sub-station- 25 years
 - v. Transmission line- 35 years
 - vi. Distribution line- 35 years
- (60) **“Z-factor Charge”** means the charge allowed to be recovered by Generation Companies, Transmission Licensees and Distribution Licensees, on account of uncontrollable factors, viz., fuel surcharge adjustment, variation in 10 year G-sec rate and cost pertaining to other uncontrollable factors, as specified in these Regulations.

Capitalised words used in these Regulations but not defined herein shall have the meanings assigned to them in the Act or other Regulations notified by the Commission.

PART A: GENERAL

3 Scope of Regulation and extent of application

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

- (i) Supply of electricity by a Generating Company to a Distribution Licensee;
- (ii) Intra-State transmission of electricity;
- (iii) Wheeling of electricity;
- (iv) Rates and charges for use of intervening transmission facilities;
- (v) Distribution Wires Business of electricity;
- (vi) Retail supply Business of electricity;
- (vii) 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 and as amended through Orders issued by the Commission from time to time;
- (viii) 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 and as amended through Orders issued by the Commission from time to time.

Provided that the Commission shall determine such tariff, having regard to the terms and conditions contained in Part G, Part H and Part I of these Regulations for applications under this Regulation for determination of tariff, for transmission, distribution wires business and retail supply business:

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.

3.2 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.

PART- B: GENERAL PRINCIPLES

4 Multi-year tariff framework

4.1 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, 2011:

Provided that the Commission may, either on *suo-motu* basis or upon application made to it by the applicant, exempt the determination of tariff of a Generating Company or Transmission Licensee or Distribution Licensee or category of Transmission Licensee

or Distribution Licensee under the Multi-Year Tariff framework for such period as may be contained in the Order granting such an exemption.

- 4.2 The multi-year tariff framework shall be based on the following elements, for calculation of Aggregate Revenue Requirement and expected revenue from tariff and charges for Generating Companies, Transmission Licensee, Distribution Wires Business and Retail Supply Business:
- (i) Control Period, before 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) A detailed Business Plan based on the forecast of the Aggregate Revenue Requirement shall be submitted by the applicant for the Commission's approval and Operational Norms and trajectories of performance parameters specified in the MYT Regulations, for each year of the Control Period;
 - (iii) Based on the approved Business Plan, the applicant shall submit the forecast of Aggregate Revenue Requirement and expected revenue from existing tariffs for each year of the Control Period, and the Commission shall approve the tariff for Generating Companies, Transmission Licensee, Distribution Wires Business and Retail Supply Business, for each year of the Control Period;
 - (iv) The Commission shall, notify by order, the change in indexation, if required, for indexed parameters as specified in the Regulations, on the 30th day of April of every year of the Control Period, starting from the second year of Control Period and notify by order, the change in tariff, as applicable to Generating Companies, Transmission Licensee, Distribution Wires Business and Retail Supply Business;
 - (v) Mid-term review of performance vis-à-vis the approved forecast and categorization of variation in performance as those caused by factors within the control of the applicant (controllable factors) and those caused by factors beyond the control of the applicant (uncontrollable factors) shall be undertaken by the Commission;
 - (vi) The mechanism for pass-through of approved gains or losses on account of uncontrollable factors as specified by the Commission in these Regulations;
 - (vii) The mechanism for sharing of approved gains or losses arising out of controllable factors as specified by the Commission in these Regulations;
 - (viii) One-time tariff determination for Generating Companies, Transmission Licensee, Distribution Wires Business and Retail Supply Business, for each financial year within the Control period along with specification of indexation for specific parameters based on the approved forecast, shall be undertaken at the start of the Control Period and also reviewed at the time of the Mid-term Performance Review.

5 Control Period

- 5.1 The Control Period under these Regulations shall be of five (5) financial years; the first application under these Regulations shall be made for the Control Period of five (5) financial years from April 1, 2011 to March 31, 2016.

6 Applicability

- 6.1 The Multi-Year Tariff framework shall apply to applications made for determination of tariff for Generating Companies, Transmission Licensee, Distribution Wires Business and Retail Supply Business.

7 Business Plan

- 7.1 The Generating Company, Transmission licensee and Distribution Licensee shall file a Business Plan by August 31, 2010, for the Control Period of five (5) financial years from April 1, 2011 to March 31, 2016, which shall comprise but not be limited to detailed category-wise sales and demand projections, power procurement plan, capital investment plan, financing plan and physical targets, in accordance with guidelines and formats, as notified by order, by the Commission from time to time.
- 7.2 The capital investment plan shall show separately, on-going projects that will spill into the year under review and new projects (along with justification) that will commence but may be completed within or beyond the tariff period. The Commission shall consider and approve the capital investment plan for which the Generating Company and Transmission Licensee or Distribution Licensee may be required to provide relevant technical and commercial details.
- 7.3 The Distribution Licensees shall project the power purchase requirement after considering effect of target set for Energy Efficiency (EE) and Demand Side Management (DSM) schemes:
- Provided that the power purchase cost of the distribution licensee will be allowed after considering the target set by the Commission for Energy Efficiency (EE) and Demand Side Management (DSM) schemes and any shortfall will be disallowed by the Commission at marginal cost of power purchase of that distribution licensee for determination of tariff.
- 7.4 The Generating Company and Transmission Licensee or Distribution Licensee shall get the Business Plan approved by the Commission before filing the MYT Petition for tariff determination. The costs corresponding to the approved Business Plan for a given year of the Control Period shall be considered for his revenue requirement, while submitting the MYT Petition.

8 Forecast

- 8.1 The applicant, based on approved Business Plan, shall submit the forecast of Aggregate Revenue Requirement and expected revenue from tariff, for the Control Period in such manner, within such time limit thereof as provided in **Part C** of these Regulations and accompanied by such fee payable, as may be specified under the MERC (Fees and Charges) Regulations, 2004, as amended from time to time.
- 8.2 Forecast of Aggregate Revenue Requirement
- 8.3 The applicant shall develop the forecast of Aggregate Revenue Requirement using the assumptions relating to the behaviour of individual variables that comprise the Aggregate Revenue Requirement during the Control Period.
- 8.4 Forecast of expected revenue from tariff and charges
- 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.
- 8.5 Based on the forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges, the Generating Company or Transmission Licensee or Distribution Licensee shall submit the forecast of tariff, that would meet the gap, if any, in the Aggregate Revenue Requirement.
- 8.6 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.
- 8.7 On receipt of the application, the Commission shall either-
- (a) issue an order approving the tariff 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, as the Commission may deem appropriate.

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

- 8.8 The Commission, in these Regulations, has specified the variables to be considered in the tariff determination of the applicant that shall be reviewed by the Commission as part of the Mid-term Performance Review in accordance with Regulation 10.

9 Specific trajectory for certain variables

- 9.1 The Commission shall stipulate a trajectory while approving the Business Plan 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, Operation & Maintenance expense norms, generating station availability, station heat rate, secondary oil consumption, auxiliary consumption, transit losses, transmission losses, supply availability and wires availability, distribution losses and collection efficiency.

- 9.2 The trajectory stipulated by the Commission in the order on Business Plan submitted by the applicant, shall be incorporated by the applicant in his forecast of Aggregate Revenue Requirement and/or expected revenue from tariff and charges under Regulation 8.

10 Mid-term Performance Review

- 10.1 Where the Aggregate Revenue Requirement and expected revenue from tariff and charges of a Generating Company or Transmission Licensee or Distribution Licensee is covered under a Multi-Year Tariff framework, then such Generating Company or Transmission Licensee or Distribution Licensee, as the case may be, shall be subject to

a Mid-term Performance Review during the Control Period in accordance with this Regulation.

- 10.2 The Generating Company or Transmission Licensee or Distribution Licensee shall make an Application for Mid-term Performance Review within the time limit specified in Regulation 18:

Provided that the Generating Company or Transmission Licensee or Distribution Licensee, as the case may be, submit to the Commission information in such form as may be stipulated by the Commission, 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.

- 10.3 The scope of the Mid-term Performance Review shall be a comparison of the performance of the Generating Company or Transmission Licensee or Distribution Licensee with the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges and shall comprise of the following:

- (a) a comparison of the audited performance of the applicant for the previous two financial years 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.

- 10.4 For the efficiency parameters stipulated by the Commission under Regulation 11, the Commission shall carry out a detailed review of performance of the applicant vis-à-vis the approved forecast, as part of the Mid-term Performance Review.

Provided that where the average 10 year G-sec rate of any completed year in the second Control Period is not more than 1% (plus or minus) vis-à-vis the benchmark rate considered at the beginning of the year, then Return on Capital employed pertaining to said variation as compared to benchmark rate, as mentioned above, will be considered for determination of tariff in the Mid-term Performance Review.

- 10.5 Upon completion of the review under Regulation 10.4 above, the Commission shall attribute any variations or expected variations in performance, for variables specified under Regulation 11 below, 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 specified under Regulation 11 below, 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 specified under Regulation 11 below 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 10.4 above for such financial year.

- 10.6 Upon completion of the Mid-term Performance Review, the Commission shall pass an order recording-

- (a) the approved aggregate gain or loss to the Generating Company or Transmission Licensee or Distribution Licensee on account of controllable factors and the amount of such gains or such losses that may be shared in accordance with Regulation 13.
- (b) the approved modifications to the forecast of the Generating Company or Transmission Licensee or Distribution Licensee for the remainder of the Control Period.

11 Controllable and uncontrollable factors

- 11.1 The “uncontrollable factors” shall comprise of the following factors which were beyond the control of, and could not be mitigated by the applicant, as determined by the Commission. List of uncontrollable factors is as follows:
- (a) Force Majeure events, such as acts of war, fire, natural calamities, etc.;
 - (b) Change in law;
 - (c) Variation in fuel cost on account of variation in coal, oil and all primary-secondary fuel prices;
 - (d) Variation in the cost of power generation and/or power purchase due to the circumstances specified in Regulation 25
 - (e) Variation in freight rates;
- 11.2 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 performance parameters;
 - (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) Variation in operation & maintenance expenses;
 - (h) Variation in Wires Availability and Supply Availability;
 - (i) Coal transit losses.

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

12.1 The approved aggregate gain or loss to the Generating Company or Transmission Licensee or Distribution Licensee on account of uncontrollable factors shall be passed through under Z-factor Charge, an adjustment in the tariff of the Generating Company or Transmission Licensee or Distribution Licensee on a half yearly basis, as may be determined in the Order of the Commission passed under these Regulations :

12.2 The Generating Company or Transmission Licensee or Distribution Licensee shall submit details in the stipulated format to the Commission on a half yearly basis for the Z-factor Charge and, for this purpose, shall submit such details of the variation between expenses incurred and the approved figures by the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission:

Provided that subsequent to the notification of these Regulations, the Generating Company or Transmission Licensee or Distribution Licensee, shall obtain the approval of the Commission prior to levying the Z-factor Charge:

12.3 Components of Z-factor Charge:

Z-factor Charge shall comprise of three components and shall be calculated as under:

$$Z = Z_{FAC} + Z_{G-sec} + Z_{OUC}$$

Where

Z = Z-factor Charge

Z_{FAC} = Z-factor Charge - component for FAC.

Z_{G-sec} = Z-factor Charge - component for 10 year G-sec rate variation

Z_{OUC} = Z-factor Charge - component for Variation in any other uncontrollable factors.

12.4 Fuel surcharge adjustment (Z_{FAC})

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) component of Z-factor Charge, as specified below.

12.5 The FAC component shall be applicable on the entire sale of the Distribution Licensee without any exemption to any consumer.

12.6 The FAC component 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.

12.7 First Approval of Z-factor Charge in the second Control Period

The Distribution Licensee shall submit details in the stipulated format to the Commission for the first half of the first year of second Control Period, for prior approval of Z-factor charge to be recovered in the second Control Period, as stipulated by the Commission.

Provided that the Distribution Licensee shall submit the details of fuel costs relating to power generated from own generation stations and variable cost of power procured for

first half of the first year of second Control Period, within 60 days of completion of first half.

Provided that the Commission shall approve Z-factor Charge for first half of the first year of second Control Period, to be recovered in the second Control Period, subject to prudence check.

12.8 Subsequent Approval of Z-factor Charge in the second Control Period

The Distribution Licensee shall submit details in the stipulated format to the Commission for the subsequent half yearly periods of the second Control Period, for prior approval of Z-factor charge to be recovered in the ensuing half yearly periods of the second Control Period.

Provided that the Distribution Licensee shall submit the details of fuel costs relating to power generated from own generation stations and variable cost of power procured for the subsequent half yearly periods of the second Control Period, within 60 days of completion of such half.

Provided that the Distribution Licensee shall submit the Z-factor Charge levied to all consumers for the preceding half yearly period vis-a-vis the Z-factor component recoverable, along with the detailed computations and supporting documents as may be required for verification by the Commission:

Provided that the Distribution Licensee shall put up on his internet website such details of the Commission's approval for levy of Z-Factor Charge, from time to time.

12.9 The formula for the calculation of the FAC component of Z-factor Charge shall be as given under:

$$Z_{FAC}(\text{Rs crore}) = \mathbf{F} + \mathbf{C} + \mathbf{B},$$

Where

Z_{FAC} = Z-factor Charge - component for FAC

F = Change in fuel cost of own generation and variable cost of power purchase

C = Carrying Cost for any under recovery/over recovery on account of Change in fuel cost of own generation and variable cost of power purchase

B = Adjustment factor for over-recovery / under-recovery

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

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

$A_{FC,Gen}$ 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 MYT Order, and subject to applicable norms.

Explanation II – for the purpose of this Regulation, the term “C” shall mean carrying cost on account of change in fuel cost of own generation and variable cost of power purchase.

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

$$B_{Hn} \text{ (Rs. Crore)} = A_{Hn-1} + R_{Hn}$$

Where:

B_{Hn} = Adjustment factor for over-recovery / under-recovery in the half "n"

A_{Hn-1} = Incremental cost in the half “n-1”.

R_{Hn} = Incremental cost in half “n-1” actually recovered in ensuing half “n”.

12.9.1 The total FAC component of Z-factor Charge 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 component of Z-factor Charge 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 component of Z-factor Charge corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total FAC component of Z-factor Charge recoverable.

Calculation of Z-factor Charge per kWh shall be as per the following formula:

$$Z_{FACRs/kWh} = (Z / (\text{Metered sales} + \text{Unmetered consumption estimates} + \text{Excess distribution losses})) * 10$$

12.10 Variation in G-sec rate (Z_{G-sec})

In case the 10 year G-sec rate varies vis-à-vis the benchmark rate at the beginning of the year as specified in Regulation 29.6, then Return on Capital employed pertaining to variation more than 1% (plus or minus) as compared to benchmark rate, will be a pass-through under Z factor Charge, on a yearly basis, in a manner as stipulated by the Commission.

12.11 Other components of Z-Factor Charge (Z_{OUC})

In case there is variation in cost for Generating Company or Licensee, on account of any other uncontrollable factors as specified in Regulation 11.1, the same shall be pass-through under Z factor Charge, on a yearly basis, in a manner as stipulated by the Commission.

13 Mechanism for sharing of gains or losses on account of controllable factors

13.1 The approved aggregate gain to the Generating Company or Transmission Licensee or Distribution 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 stipulated in the Order of the Commission under Regulation 10.6;
 - (b) The balance amount, which will amount to two-third of such gain, may be utilised at the discretion of the Generating Company or Transmission Licensee or Distribution Licensee.
- 13.2 The approved aggregate loss to the Generating Company or Transmission Licensee or Distribution 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 stipulated in the Order of the Commission under Regulation 10.6; and
 - (b) The balance amount of loss shall be absorbed by the Generating Company or Transmission Licensee or Distribution Licensee.
- 13.3 Gains and losses on account of controllable factors during the second Control Period shall be shared with the consumers at the time of Mid-term Performance Review and also at the time of tariff determination process of third Control Period.

14 Alternative terms and conditions

- 14.1 A Generating Company or Distribution Licensee, as the case may be, may agree, with any open access consumer, 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 such open access 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- C: PROCEDURE FOR DETERMINATION OF TARIFF

15 Procedures relating to making an application for determination of Tariff

- 15.1 An application for determination of tariff 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 MERC (Fees and Charges) Regulations, 2004, as amended from time to time.
 - 15.1.1 The proceedings to be held by the Commission for determination of tariff shall be in accordance with the MERC (Conduct of Business) Regulations, 2004, as amended from time to time.
- 15.2 Notwithstanding anything contained in these Regulations, the Commission shall at all times have the authority, either on *suo motu* basis or on a Petition filed by any interested or affected Party, to determine the tariff, including terms and conditions thereof, of any Generating Company or Transmission Licensee or Distribution Licensee:

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:

16 Determination of Generation Tariff

16.1 Existing generating station

16.1.1 Where the Commission has, at any time prior to the date of effectiveness 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 Unit/Station, then the tariff for supply of electricity by the Generating Company to the Distribution Licensee shall be in accordance with tariff mentioned in such power purchase agreement or arrangement for such period as may be so approved or adopted by the Commission.

16.1.2 Where, as at the date of effectiveness 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 effectiveness 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 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 or arrangement.

16.2 New generating stations

16.2.1 The tariff for the supply of electricity by a Generating Company to a Distribution Licensee from a new generating Unit/Station shall be in accordance with tariff as per 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.

16.3 Own generating stations

16.3.1 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.

- 16.3.2 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 capital employed accruing to such business.
- 16.4 The Distribution Licensee shall submit, along with the separate application for determination of tariff for retail supply of electricity, the information required under Part E of these Regulations relating to the Generation Business,.
- 16.5 Notwithstanding anything contained in this Regulation 16, 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.

17 Determination of Tariff for Transmission, Distribution Wires Business and Retail Supply Business

- 17.1 The Commission shall determine the tariff for Transmission, Distribution Wires Business and Retail Supply Business based on an application made by the Licensee in accordance with the procedure contained in this Regulation 17.
- 17.2 The Commission shall determine the tariff for -
- (a) Transmission of electricity, in accordance with the terms and conditions contained in **Part G** of these Regulations;
 - (b) Distribution Wires Business, in accordance with the terms and conditions contained in **Part H** of these Regulations; and
 - (c) Retail Supply Business, in accordance with the terms and conditions contained in **Part I** of these Regulations.
- 17.3 The applicant shall provide, based on the approved Business Plan, 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 category-wise tariff and how such revision would meet the gap, if any, in Aggregate Revenue Requirement for each year of the Control Period.
- 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.
- 17.4 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.

- 17.5 The applicant shall, within three (3) days of an intimation provided to him in accordance with Regulation 17.4, 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 suggestions and 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 in the manner so stipulated by the Commission:

Provided further that the web-link to the information mentioned in the second proviso to Regulation 17.5 above shall be easily accessible, archived for downloading and shall be prominently displayed on the applicant's 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.

- 17.6 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.
- 17.7 The Commission may, if it considers 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 MERC (Conduct of Business) Regulations, 2004, as amended from time to time:
- 17.8 The procedural aspects pertaining to applications contained in this Regulation 17 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.

18 Time limit for making an application for determination of Tariff

- 18.1 An application for determination of tariff, under a Multi-Year Tariff framework for the second Control Period from April 1, 2011 to March 31, 2016, shall be made to the Commission not less than one hundred and twenty (120) days before the commencement of FY 2011-12.

- 18.2 An application for Mid-term Performance Review under a Multi-Year Tariff framework for the second Control Period from April 1, 2011 to March 31, 2016, shall be made to the Commission not less than one hundred and twenty (120) days before the commencement of FY 2014-15.

19 Tariff Order

- 19.1 The Commission shall, within one hundred and twenty (120) days from 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 stipulated in that Order;
 - (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 rejecting his application.
- 19.2 The applicant shall publish the tariffs approved by the Commission in at least two (2) English and two (2) Marathi language daily newspapers having wide circulation in the area of licence and shall put up the approved tariff / tariff schedule on his 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.
- 19.3 The tariffs 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.

20 Adherence to Tariff Order

- 20.1 No tariff or part of any tariff may be ordinarily amended, more frequently than once in Control Period, except in respect of any changes expressly permitted under Z-factor surcharge as specified in Regulation 12.
- 20.2 The Commission, may, after satisfying itself for reasons to be recorded in writing, allow for the revision of tariff.
- 20.3 If any Generating Company or Transmission Licensee or Distribution Licensee 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 payable to 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 Generating Company or Transmission Licensee or Distribution Licensee.
- 20.4 The Transmission Licensee or Distribution 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.

PART D: ELECTRICITY PURCHASE AND PROCUREMENT

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 Trading Licensee or Distribution 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 The Distribution Licensee shall undertake his power procurement during the year in accordance with the power procurement plan for the Control Period, which may include long-term, medium-term and short-term power procurement, approved by the Commission in accordance with these Regulations.
- 22.2 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 seven years but not exceeding twenty five years (i.e., long-term power procurement); and
 - (b) Procurement of power under any arrangement or agreement with a term or duration exceeding one year but not exceeding seven years (i.e., medium-term power procurement).
 - (c) 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 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 power procurement plan shall be submitted for the second Control Period commencing on April 1, 2011:
- Provided further that the power procurement plan, approved as a part of the Business Plan, shall be submitted along with the application for determination of tariff, in accordance with Part B of these Regulations.
- Provided that the power procurement plan submitted by the Distribution Licensee may include long-term, medium-term and short-term power procurement sources of power, in accordance with these Regulations.
- 23.2 The power procurement plan of the Distribution Licensee shall comprise of the following:
- (a) A quantitative forecast of the unrestricted demand for electricity for each tariff category, within his area of supply, from each tariff category over the Control Period;

- (b) An estimate of the quantities of electricity supply from the identified sources of generation and power purchase;
- (c) An estimate of availability of power to meet the base load and Peak load requirement.
Provided that estimate should be monthly estimation of demand and supply both in Mega-Watt (MW) as well as expressed in Million Units (MUs).
- (d) Standards to be maintained with regard to quality and reliability of supply, in accordance with the MERC (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2005, as amended from time to time;
- (e) Measures proposed to be implemented as regards energy conservation and energy efficiency;
- (f) 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;
- (g) 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 month over the Control 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.

- (h) Short-term power procurement proposed shall be in accordance with Regulation 92 of these Regulations.

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

- 23.5 The Commission shall forward a copy of the 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 MERC (Transmission Open Access) Regulations, 2005, as amended from time to time;

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

- 23.6 The Distribution Licensee may, as a result of additional information not previously known or available to him at the time of submission of the procurement plan under Regulation 23.123.1, apply for a modification in the power procurement plan, for the remainder of the Control Period, as part of the application for Mid-term Performance Review under Regulation 10:

Provided that the Distribution Licensee may be allowed a modification of the power procurement plan under this Regulation not more than once in the Control Period, i.e., during the Mid-term Performance Review.

- 23.7 The Commission may, as a result of additional information not previously known or available to the Commission at the time of submission of the procurement plan under Regulation 23.1, if it so deems, either on *suo motu* basis or on an application made by any interested or affected party, modify the procurement plan of the Distribution Licensee, for the remainder of the Control Period, as part of the Mid-term Performance Review.

Provided that the Commission may modify the power procurement plan under this Regulation not more than once in the Control Period.

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

- (a) issue an order approving the power procurement plan, or modifications thereto, subject to such modifications and conditions as it may deem appropriate; or
- (b) reject the 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 direct 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 rejecting his power procurement plan.

24 Approval of power purchase agreement/arrangement

- 24.1 Every agreement or arrangement for power procurement by a Distribution Licensee from a Generating Company or Licensee or from other source of supply entered into after the date of effectiveness 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 power procurement 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 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 power procurement plan of the Distribution Licensee and the following factors:
- (a) Requirement for power procurement under the approved 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 co-generation 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 Additional Short-term power procurement

- 25.1 The Distribution Licensee can undertake additional short-term power procurement during the year, over and above the power procurement plan for the Control Period approved by the Commission, in accordance with this Regulation.
- 25.2 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 additional short-term arrangement or agreement for procurement of power (short-term means upto period of one year):

Provided that if the total power purchase cost for any block of six months including such short-term power procurement exceeds 105% of the power purchase cost approved by the Commission for the respective block of six months, the Distribution Licensee will have to obtain prior approval of the Commission.

Provided that the proposed short-term power procurement shall be in accordance with Regulation 92 of these Regulations.

- 25.3 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.
- 25.4 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.
- 25.5 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:
- 25.6 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 25.2 to Regulation 25.4 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.
- 25.7 Subject to the cases specified in Regulation 25.2 to Regulation 25.4 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: FINANCIAL PRINCIPLES

26 Capital Cost and capital structure

- 26.1 Capital cost for a project shall include:
- (a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation on the loan during construction up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;
 - (b) capitalised initial spares subject to the ceiling rates specified in this Regulation; and
 - (c) additional capital expenditure determined under Regulation 28:
Provided that the assets forming part of the project but not put to use or not in use, shall be taken out of the capital cost.
- 26.2 The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.

- 26.3 The approved Capital Cost shall be considered for determination of tariff and if sufficient justification is provided for any escalation in the Project Cost, the same may be considered by the Commission subject to the prudence check:

Provided that in case the actual capital cost is lower than the approved capital cost, then the actual capital cost will be considered for determination of tariff of the Generating Company or Licensee.

- 26.4 The actual capital expenditure on COD for the original scope of work based on audited accounts of the Company limited to original cost may be considered subject to the prudence check by the Commission.

- 26.5 Where power purchase agreement or bulk power transmission agreement provides for a ceiling of capital cost, the capital cost to be considered shall not exceed such ceiling.

- 26.6 The capital cost may include capitalised initial spares for a maximum of first five years of operation as follows:

- (a) upto 2.5% of original capital cost in case of coal based/lignite fired generating stations,
- (b) upto 4.0% of original capital cost in case of gas turbine/combined cycle generating stations,
- (c) upto 1.5% of original capital cost in case of hydro-generating stations, and
- (d) upto 1.5% of original capital cost in case of Transmission Licensees.

- 26.7 Scrutiny of the cost estimates by the Commission shall be limited to the reasonableness of the capital cost, financing plan, interest during construction, use of efficient technology, and such other matters for determination of tariff.

- 26.8 Revaluation of assets shall be permitted during the Control Period provided it does not affect tariff adversely. Any benefit from such revaluation shall be passed on to persons sharing the capacity charge in case of a Generating Company and to long-term intra-State open access customers of transmission licensee or distribution licensee, or retail supply consumers in case of distribution licensees, at the time of Mid-term Performance Review and final truing up of second Control Period.

- 26.9 Any expenditure on replacement, renovation and modernization or extension of life of old fixed assets, as applicable to Generating Companies and Licensees, shall be considered after writing off the net value of such replaced assets from the original capital cost and will be calculated as follows:

$$\text{Net Value of Replaced Assets} = \text{OCFA} - \text{AD} - \text{CC};$$

Where;

OCFA: Original Capital Cost of Replaced Assets;

AD: Accumulated depreciation pertaining to the Replaced Assets;

CC: Total Consumer Contributions pertaining to the Replaced Assets

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

27 Additional capitalization

27.1 The following capital expenditure, actually incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to the prudence check:

- (a) Due to Un-discharged liabilities within the original scope of work
- (b) On works within the original scope of work, deferred for execution
- (c) To meet award of arbitration and satisfaction of final and unappealable order or decree of a court arising out of original scope of works,
- (d) On account of change in law,
- (e) On procurement of initial spares included in the original project costs subject to the ceiling norm laid down in Regulation 26,
- (f) Any additional works/services, which have become necessary for efficient and successful operation of a generating station or a transmission but not included in the original capital cost.

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

Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the generating Unit/Station or transmission system.

27.2 Impact of additional capitalization on tariff, as the case may be, shall be considered during Mid-term Performance Review and tariff determination of third Control Period starting from April 1, 2016.

28 Consumer contribution, Deposit work and Grant

28.1 The following nature of work carried out by the licensee shall be classified under this category:

- (a) Works after obtaining a part or all of the funds from the users in the context of deposit works.
- (b) Capital works undertaken by utilising grants received from the State and Central Governments, including funds under RGGVY, APDRP, etc.
- (c) Any other grant of similar nature and such amount received without any obligation to return the same and with no interest costs attached to such subvention.

28.2 Principles for treatment of the expenses on such capital expenditure shall be as follows:

- (d) Normative O&M expense as specified in these Regulations shall be allowed.

- (e) Provisions related to Depreciation, as specified in Regulation 30, shall be applicable to the extent of financial support, including the loan and equity contribution, provided by the generating company or licensee, as the case may be.
- (f) Provisions related to Return on Capital Employed, as specified in Regulation 29.

29 Return on Capital Employed

- 29.1 Return on Capital Employed (RoCE) shall be computed in rupee terms, on the Regulated Rate Base (RRB) determined by the Commission in accordance with this Regulation.
- 29.2 Return on Capital Employed (RoCE) shall be used to provide a return to the Generating Company and Licensees, and shall cover the cost of equity and loan, without providing separate allowances for interest on loans.
- 29.3 The RRB shall be equal to the total capital employed, i.e., the original cost of assets less the accumulated depreciation. Capital Work In Progress (CWIP), Consumer Contribution, and Capital Subsidies/Grants shall not form part of the RRB.
- 29.4 The RRB shall be determined for each year of the Control Period at the beginning of the Control Period based on the approved capital investment plan with corresponding capitalisation schedule. The Regulated Rate Base for the i^{th} year of the Control Period shall be computed in the following manner:

$$RRB_i = RRB_{i-1} + \Delta AB_i / 2;$$

Where,

' i ' is the i^{th} year of the Control Period, $i = 1, 2, 3, 4$, and 5 for the second Control Period;

RRB_i : Regulated Rate Base for the i^{th} year of the second Control Period;

AB_i : Change in the Regulated Rate Base in the i^{th} year of the Control Period. This component shall be the average of the value at the beginning and end of the year as the asset creation is spread across a year and shall be computed as follows:

$$AB_i = Inv_i - D_i - CC_i;$$

Where,

Inv_i : Investments projected to be capitalised during the i^{th} year of the Control Period and approved;

D_i : Amount set aside or written off on account of Depreciation of fixed assets for the i^{th} year of the Control Period;

CC_i : Consumer Contributions pertaining to the RRB_i and capital grants/subsidies received during i^{th} year of the Control Period for construction of service lines or creation of fixed assets;

RRB_{i-1} : Regulated Rate Base for the Financial Year preceding the i^{th} year of the Control period. For the first year of the Control Period, RRB_{i-1} shall be the Regulated Rate Base for the Base Year i.e. RRB_0 ;

$$RRB_0 = OCFA_0 - AD_0 - CC_0;$$

Where;

OCFA₀: Original Cost of Fixed Assets at the end of the Base Year available for use and necessary for the purpose of the regulated business;

AD₀: Amounts written off or set aside on account of depreciation of fixed assets pertaining to the regulated business at the end of the Base Year;

CC₀: Total contributions pertaining to the OCFA₀, made by the consumers towards the cost of construction of distribution/service lines by the Distribution Licensee and also includes the capital grants/subsidies received for this purpose;

- 29.5 Return on Capital Employed (RoCE) for the year 'i' shall be computed in the following manner:

$$\mathbf{ROCE_i = ROCE_0 \times RRB_i}$$

Where,

ROCE is the maximum allowable pre-tax ROCE as specified in Regulation 29.6.

RRB_i - Regulated Rate Base is the asset base for each year of the Control Period based on the capital investment plan approved by the Commission.

- 29.6 The ROCE allowable during the second Control Period will be

- (a) 10 year G-sec rate + 4.50 %, for Generating Companies, Transmission Licensees, and Distribution Wires Licensee/Business,
- (b) 10 year G-sec rate + 5.00 %, for Retail Supply Licensee/Business.

- 29.7 The Commission will notify the benchmark 10 year G-sec rate on 30th day of April based on the 10 year G-sec rate communicated by Reserve Bank of India, and in case the average 10 year G-sec rate of the completed year varies more than 1% (plus or minus) in any year of the Control Period vis-à-vis the benchmark rate considered at the beginning of the year, then Return on Capital employed pertaining to variation more than 1% (plus or minus) as compared to benchmark rate, as mentioned above, will be a pass-through under Z factor Charge.

30 Depreciation

- 30.1 The value base for the purpose of depreciation shall be the Capital Cost of the asset admitted by the Commission.

- 30.2 The Generation Company and Transmission Licensee or Distribution Licensee shall be permitted to recover depreciation on the value of fixed assets used in their respective 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 Generating Company or Transmission Licensee or Distribution Licensee shall ensure that once the individual asset is depreciated to the extent of

seventy (70) percent of remaining depreciable value as on 31st March of the year closing shall be spread over the balance useful life of the assets, as provided in these Regulations.

Provided that the Generating Company or Transmission Licensee or Distribution Licensee, shall submit all such details or documentary evidence, as may be required under this Regulation and as stipulated by the Commission, from time to time, to substantiate the above claims.

- (c) The salvage 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.
- 30.3 Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.
- 30.4 In case of the existing projects, the balance depreciable value as on April 1, 2011, shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto March 31, 2011, from the gross depreciable value of the assets.

Provided that depreciation shall be chargeable from the first year of commercial operation.

- 30.5 In case of projected commercial operation of the asset for part of the year, depreciation shall be calculated based on the average of opening and closing value of asset, approved by the Commission.

Provided that depreciation will be re-calculated during truing-up for assets capitalised at the time of Mid-term Performance Review or at the time of final truing up during determination of tariff for third Control Period, based on documentary evidence of asset capitalised by the applicant, subject to the prudence check of the Commission, such that the depreciation is calculated proportionately from the date of capitalisation.

31 Interest on Working Capital

31.1 Generation:

- (a) In case of coal based/oil-based/lignite-fired generating stations, working capital shall cover:
 - (i) Cost of coal or lignite for half (1/2) month for pit-head generating stations and one month for non-pit-head generating stations, corresponding to target availability;
 - (ii) Cost of oil for one month corresponding to target availability;
 - (iii) Cost of secondary fuel oil for one month corresponding to target availability;
 - (iv) Operation and Maintenance expenses for one month;
 - (v) Maintenance spares at one (1) per cent of the historical cost; and
 - (vi) Receivables for sale of electricity equivalent to one and half 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 half 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 one (1) per cent of the historical cost; and
 - (v) Receivables for sale of electricity equivalent to one and half 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 one (1) per cent of the historical cost; and
 - (iii) Receivables for sale of electricity equivalent to one and half 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 State Bank Advance Rate (SBAR) of State Bank of India as on the date on which the application for determination of tariff is made.

31.2 Transmission:

- (a) The Transmission Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:
 - (i) One-twelfth of the amount of operation and maintenance expenses for such financial year; plus
 - (ii) 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
 - (iii) One month equivalent of the expected revenue from transmission charges at the prevailing tariffs; minus
 - (iv) Amount, if any, held as security deposits from Transmission System Users.

- (b) Interest shall be allowed at a rate equal to the State Bank Advance Rate (SBAR) of the State Bank of India as at the date on which the application for determination of tariff is made.
- (c) 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.

31.3 Distribution Wires Business

- (a) The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Distribution Wires Business for the financial year, computed as follows:
 - (i) One-twelfth of the amount of Operation and Maintenance expenses for such financial year; plus
 - (ii) 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
 - (iii) One and half months equivalent of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs; minus
- (b) Interest shall be allowed at a rate equal to the State Bank Advance Rate (SBAR) of the State Bank of India as at the date on which the application for determination of tariff is made.

31.4 Retail Supply of Electricity

- (a) The Distribution Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:
 - (i) One-twelfth of the amount of Operation and Maintenance expenses for such financial year; plus
 - (ii) 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
 - (iii) One and half months equivalent of the expected revenue from sale of electricity at the prevailing tariffs; minus
 - (iv) Amount held as security deposits under clause (a) and clause (b) of sub-section (1) of Section 47 of the Act from consumers and Distribution System Users; minus
 - (v) One month equivalent of cost of power purchased, based on the annual power procurement plan.

Provided that in case of power procurement from 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.

- (b) Interest shall be allowed at a rate equal to the State Bank Advance Rate (SBAR) of the State Bank of India as at the date on which the application for determination of tariff is made.
- (c) 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.

32 Adjustment to contingency reserves

- 32.1 Existing balance of Contingency Reserves of Licensees, as on April 1, 2011, shall be adjusted in the determination of tariff for the second Control Period, as the case may be.
- 32.2 No diminution in the value of contingency reserve as mentioned above shall be allowed to be adjusted as a part of tariff.

PART F: GENERATION

33 Applicability

33.1 The Regulations specified in this Part F shall apply for 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 Renewable Energy sources of generation shall be in accordance with terms and conditions as stipulated in the relevant Regulations/Orders of the Commission.

33.2 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 effectiveness of these Regulations; or
- b) where such tariff is pursuant to a power purchase agreement or arrangement entered into prior to the date of effectiveness of these Regulations and either the Commission has not previously approved such agreement/arrangement or the agreement/arrangement envisages that the tariff shall be based on the MERC Tariff Regulations; or
- c) 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 its 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 further that the reasons for such deviation(s) shall be recorded in writing.

33.3 Notwithstanding anything contained in this Part F, 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.

34 Petition for determination of generation tariff

34.1 A Generating Company is required to file a Petition for determination of tariff for supply of electricity to Distribution Licensees in accordance with the provisions of Part C of these Regulations.

34.2 Tariff in respect of a Generating Station under these Regulations may 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.

- 34.3 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, which shall be duly audited and certified by the statutory auditors, and submit such audited and certified statement to the Commission along with the application for determination of tariff.

- 34.4 A Generating Company may make Petition for determination of provisional tariff in advance of the anticipated Date of Commercial Operation of Unit or Stage or Generating Station as a whole, as the case may be, based on the capital expenditure actually incurred up to the date of making the Petition or a date prior to making of the Petition, duly audited and certified by the statutory auditors and the provisional tariff shall be charged from the date of commercial operation of such Unit or Stage or Generating Station, as the case may be.

- 34.5 A Generating Company shall make a fresh Petition in accordance with these Regulations, for determination of final tariff based on actual capital expenditure incurred up to the date of commercial operation of the Generating Station duly certified by the statutory auditors based on Annual Audited Accounts.

- 34.6 Any difference in provisional tariff and the final tariff determined by the Commission and not attributable to the Generating Company may be adjusted at the time of determination of final tariff for the following year as directed by the Commission.

- 34.7 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.

35 Components of Tariff

- 35.1 The 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 (variable) Charges (for recovery of primary and secondary fuel cost).
- 35.2 The tariff for sale of electricity from a Hydro Generating Station shall comprise of two parts, namely, the recovery of Capacity Charge and Energy Charge.

36 Annual Fixed Charges

36.1 Components of Annual Fixed charges

The Annual Fixed Charges shall comprise of the following elements:

- (a) Depreciation;
- (b) Operation & Maintenance Expenses;
- (c) Return on Capital Employed;
- (d) Interest on Working Capital;

Less:

- (a) Non Tariff Income.

Provided that Depreciation and Return on Capital Employed for Thermal and Hydro Generating Stations in accordance with the provisions specified in Part E of these Regulations.

37 Capital cost

37.1 Capital Cost for a project shall include:

- a. The expenditure incurred including interest during construction and financing charges, as admitted by the Commission after prudence check.
- b. Capitalised initial spares subject to the ceiling rates; and
- c. Additional capital expenditure determined under this Regulation:

Provided that the cost of the common assets forming part of the project, should be considered based on the suitable allocation and such allocated cost shall form part of the capital cost:

Provided that the assets forming part of the project, but not in use, shall be taken out of the capital cost:

37.2 The Capital Cost admitted by the Commission after prudence check shall form the basis for determination of tariff

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 prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run and such other matters as may be considered appropriate by the Commission for determination of tariff:

Provided further that in case of the existing Generating Stations, the capital cost of the project as admitted by the Commission prior to date of effectiveness of these Regulations and the additional capital expenditure projected to be incurred and capitalised for the respective year of the Second Control Period, as may be admitted by the Commission, shall form the basis for determination of tariff.

Provided also that in case the site of a Hydro Generating Station is awarded to a developer (not being a State controlled or owned company) by the State Government by following a transparent process of bidding, any expenditure incurred or committed to be incurred including the premium payable to the State Government by the project developer for getting the project site allotted, shall not be included in the capital cost:

Provided also that the capital cost in case of such hydro generating station shall include:

- (a) cost of approved Rehabilitation and Resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
- (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Viduytikaran Yojana (RGGVY) project in the affected area.

37.3 Additional Capitalisation: The following capital expenditure within the original scope of work actually incurred after the date of commercial operation 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/un-discharged liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares in the original scope of work, subject to ceiling specified in Regulation 26.6;
- (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 the details of works included in the original scope of work along with estimates of expenditure, un-discharged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

37.4 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) Liabilities to meet award of arbitration and for compliance of an unappealable order or decree of a court;
- (ii) On account of change in law;

- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work; and
- (iv) In case of hydro generating station, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the Generating Company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work, which has become necessary for successful and efficient plant operation.

37.5 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, heat-convector, etc., bought after the cut-off date may be capitalised, with the prior approval of the Commission.

37.6 Renovation & Modernisation:

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

Provided that in case of coal-based/lignite fired thermal generating station, the Generating Company, may, in its discretion, avail of a 'special allowance' in accordance with the norms specified in Clause (iv), as compensation for meeting the requirement of expenses including Renovation and Modernisation beyond the useful life of the generating station or a unit thereof, and in such an event revision of the capital cost shall not be considered and the applicable operational norms shall be revised but the special allowance shall be included in the Annual Fixed Cost:

Provided also that such option shall not be available for a generating station or unit for which Renovation and Modernization has been undertaken and the expenditure has been admitted by the Commission before the date of effectiveness of these Regulations.

- (ii) Where the Generating Company, as the case may be, makes an application for approval of its proposal for Renovation and Modernisation, the approval

shall be granted after due consideration of reasonableness of the cost estimates, schedule of completion, use of efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission.

- (iii) Any expenditure incurred or projected to be incurred and admitted by the Commission after prudence check based on the estimates of Renovation and Modernization expenditure and life extension, and after deducting the accumulated depreciation already recovered from the original project cost, shall form the basis for determination of tariff.
- (iv) A Generating Company on opting for the alternative in the first proviso to clause (i) of this Regulation, for a coal-based/lignite fired thermal generating station, shall be allowed special allowance @ Rs. 5 lakh/MW/year in FY 2011-12 and thereafter escalated @ 5.72% every year during the Second Control Period, unit-wise from the next financial year from the respective date of the completion of useful life with reference to the date of commercial operation of the respective unit of generating station:

Provided that in respect of a unit in commercial operation for more than 25 years as on 1.4.2011, this allowance shall be admissible from FY 2011-12.

38 Sale of Infirm Power

- 38.1 The tariff for sale of infirm power from the thermal generating station to the Distribution Licensee shall be equivalent to the actual fuel cost, including the secondary fuel cost, as the case may be, incurred during that period subject to prudence check.

Provided that any revenue other than the recovery of fuel cost earned by the generating company from sale of infirm power shall be taken as reduction in capital cost and shall not be treated as revenue.

39 Non Tariff Income

- 39.1 The amount of non tariff income relating to the Generation Business as approved by the Commission shall be deducted from the Annual Fixed Cost in determining the Annual Fixed Cost of the Generation Company:

Provided that the Generation Company shall submit full details of its forecast of non tariff income to the Commission in such form as may be stipulated by the Commission from time to time.

The indicative list of various heads to be considered for non tariff income shall be as under:

- a) Income from rent of land or buildings;
- b) Income from sale of scrap;

- c) Income from statutory investments;
- d) Income from sale of Ash/rejected coal;
- e) Interest on delayed or deferred payment on bills;
- f) Interest on advances to suppliers/contractors;
- g) Rental from staff quarters;
- h) Rental from contractors;
- i) Income from hire charges from contractors and others;
- j) Income from advertisements, etc.;
- k) Any other non tariff income

40 Norms of operation for Thermal Generating Stations

The norms of operation as given hereunder shall apply:

40.1 Target Availability for recovery of full Capacity (Fixed) charges and Target Plant Load Factor for Incentive for thermal generating stations

- (a) Target Availability for full recovery of annual fixed charges shall be 85 per cent for all thermal generating stations, except those covered under clause (b)
- (b) Target Availability for full recovery of annual fixed charges for the following Maharashtra State Power Generation Company Ltd. (MSPGCL) stations shall be:

Particulars	Target Availability (%)
Koradi TPS	72.00
Khaperkheda TPS	85.00
Chandrapur TPS	80.00
Nasik TPS	80.00
Bhusawal TPS	80.00
Paras TPS excluding Unit No. 3	80.00
Parli TPS excluding Unit No. 6	80.00

Provided that the Commission may revise the norms for Availability for the above mentioned Generating Stations in case of Renovation & Modernisation undertaken by the Generating Station.

- (c) Target Plant Load Factor for incentive shall be 85 per cent.

40.2 Gross Station Heat Rate – For existing Generating Stations

- a) Existing Coal-based Thermal Generating Stations, other than those covered under clauses (b), (c) and (d), below:

200/210/250 MW sets	500 MW and above sets
2450 kcal/kWh	2425 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 gross 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) Thermal Generating Stations of Maharashtra State Power Generation Company Ltd. (MSPGCL):

Year	Koradi	Khaperkheda	Chandrapur	Nasik	Bhusawal	kcal/kWh	
						Paras excluding Unit No. 3	Parli excluding Unit No. 6
FY 2010-11	2965	2560	2617	2722	2734	3186	2745
FY 2011-12	2975	2568	2626	2731	2742	3199	2753
FY 2012-13	2985	2575	2635	2740	2751	3212	2762
FY 2013-14	2873	2424	2539	2664	2671	3225	2679
FY 2014-15	2881	2429	2544	2670	2677	3237	2684
FY 2015-16	2889	2433	2549	2677	2683	3250	2690

Provided that the Commission may revise the norms for the heat rate for the above mentioned Generating Stations in case of Renovation & Modernisation undertaken by the Generating Station.

- c) Thermal Generating Units of The Tata Power Company Ltd.-Generation Business (TPC-G):

kcal/kWh

Year	Unit-4	Unit-5	Unit-6
			With Oil & Gas
FY 2011-12	2570	2575	2434
FY 2012-13	2576	2583	2439
FY 2013-14	2581	2591	2443
FY 2014-15	2586	2573	2448
FY 2015-16	2591	2581	2453

d) Thermal Generating Station of Reliance Infrastructure Ltd.-Generation Business (RInfra-G):

kcal/kWh

Year	Dahanu TPS
FY 2011-12	2308
FY 2012-13	2313
FY 2013-14	2317
FY 2014-15	2322
FY 2015-16	2327

e) Lignite based Power Plants

For lignite fired power plants, the Commission has specified the multiplying factors, depending upon the moisture content in the lignite, for deriving the gross Station Heat Rate from that applicable for coal based thermal power plants, as under:

- (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.

f) Gas Turbine/Combined Cycle generating stations,

kcal/kWh

Year	Uran TPS of MSPGCL	Unit-7 of TPC-G
FY 2011-12	2009	2009
FY 2012-13	2013	2013
FY 2013-14	2017	2017

Year	Uran TPS of MSPGCL	Unit-7 of TPC-G
FY 2014-15	2021	2021
FY 2015-16	2025	2025

40.3 Gross Station Heat Rate – For new Generating stations achieving COD after the effectiveness of these Regulations

a) Coal and lignite based thermal power generating stations

= 1.065 x Design Heat Rate (kcal/kWh)

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

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

Pressure Rating (kg/cm ²)	150	170	170	247	247
SHT/RHT (°C)	535/535	537/537	537/565	537/565	565/593
Type of BFP	Electrical Driven	Turbine driven	Turbine driven	Turbine driven	Turbine driven
Max Turbine Cycle Heat rate (kcal/kWh)	1955	1950	1935	1900	1850
Min. Boiler Efficiency					
Sub-Bituminous Indian Coal	0.85	0.85	0.85	0.85	0.85
Bituminous Imported Coal	0.89	0.89	0.89	0.89	0.89
Max Design Unit Heat rate (kcal/kWh)					
Sub-Bituminous Indian Coal	2300	2294	2276	2235	2176
Bituminous Imported Coal	2197	2191	2174	2135	2079

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

Provided also that where Unit heat rate has not been guaranteed but turbine cycle heat rate and boiler efficiency are guaranteed separately by the same supplier or

different suppliers, the unit design heat rate shall be arrived at by using guaranteed turbine cycle heat rate and boiler efficiency:

Provided also that if one or more Units are declared under commercial operation prior to the date of effectiveness of these Regulations, the heat rate norms for those units as well as Units declared under commercial operation on or after the effectiveness of these Regulations shall be lower of the heat rate norms arrived at by above methodology and the norms in accordance with the Regulation 40.2 (a).

Provided also that in case of lignite-fired generating stations (including stations based on Circulating Fluidised Bed Combustion [CFBC] technology), maximum design heat rates shall be increased using factor for moisture content given in Clause 40.2 (e) of this Regulation.

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

b) Gas-based/Liquid-based Thermal Generating Unit(s)

$$= 1.05 \times \text{Design Heat Rate of the Unit for Natural Gas and RLNG (kcal/kWh)}$$

$$= 1.071 \times \text{Design Heat Rate of the Unit for Liquid Fuel (kcal/kWh)}$$

Where the Design Heat Rate of a unit shall mean the guaranteed heat rate for a unit at 100% MCR and at site ambient conditions; and the Design Heat Rate of a unit shall mean the guaranteed heat rate for a unit at 100% MCR, site ambient conditions, zero percent make up, design cooling water temperature/back pressure.

40.4 Secondary fuel oil consumption

For Existing Stations:

- a) Secondary fuel oil consumption for all thermal generating Units/Stations, except those covered under clause (b) shall be as under:
 - i. Coal-based generating stations: 1.0 ml/kWh
 - ii. Lignite-Fired generating stations except stations based on CFBC technology: 2.0 ml/kWh
 - iii. Lignite-Fired generating stations based on CFBC technology: 1.25 ml/kWh
- b. Secondary fuel oil consumption norm for following MSPGCL stations, shall be as under:

Particulars	Secondary Fuel Oil Consumption (ml/kWh)
Koradi TPS	2

Particulars	Secondary Fuel Oil Consumption (ml/kWh)
Khaperkheda TPS	2
Chandrapur TPS	2
Nashik TPS	2
Bhusawal TPS	2
Paras TPS excluding Unit No. 3	2
Parli TPS excluding Unit No. 6	2

Provided that the Commission may revise the norms for the secondary fuel oil consumption for the above mentioned Generating Stations in case of Renovation & Modernisation undertaken by the Generating Station.

For New Generating Stations:

- b) Coal-based Generating Stations : 1.0 ml/kWh
- c) Lignite-Fired Generating Stations except stations based on CFBC technology : 2.0 ml/kWh
- d) Lignite-Fired Generating Stations based on CFBC technology : 1.25 ml/kWh

40.5 Auxiliary Energy Consumption

- (a) Coal-based Generating Stations, other than those covered under Clause (b):

Auxiliary Energy Consumption	With Natural Draft cooling tower or without cooling tower
(i) 200 MW series	8.50%
(ii) 500 MW & above	
Steam driven boiler feed pumps	6.00%
Electrically driven boiler feed pumps	8.50%

Provided further that for Thermal Generating Stations with induced draft cooling towers, the norms shall be higher by 0.5%, as compared to above norms.

- (b) Coal based generating stations of MSPGCL:

Plants	Auxiliary Energy Consumption				
	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Koradi TPS	10.55%	10.40%	10.21%	10.00%	9.80%
Paras TPS excluding Unit No. 3	11.33%	10.74%	10.01%	9.16%	9.00%
Bhusawal TPS	10.30%	9.91%	9.47%	9.00%	8.80%
Nashik TPS	9.27%	8.93%	8.50%	8.50%	8.50%
Parli TPS excluding	10.16%	9.66%	9.12%	8.50%	8.50%

Plants	Auxiliary Energy Consumption				
	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Unit No. 6					
Khaperkheda TPS	8.98%	8.81%	8.63%	8.50%	8.50%
Chandrapur TPS	8.18%	8.18%	8.18%	8.18%	8.18%

Provided that the Commission may revise the norms for the auxiliary energy consumption for the above mentioned Generating Stations in case of Renovation & Modernisation undertaken by the Generating Station.

(c) Gas Turbine/Combined Cycle generating stations:

(i) Combined cycle : 3.0%

(ii) Open cycle : 1.0%

(d) Lignite-fired thermal generating stations:

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

The auxiliary energy consumption norms shall be 0.5 percentage point more than the auxiliary energy consumption norms of coal based generating stations above.

Provided that for the lignite fired stations using CFBC technology, the auxiliary energy consumption norms shall be 1.5 percentage point more than the auxiliary energy consumption norms of coal based generating stations as specified above.

40.6 Transit and handling Losses

Transit and handling 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:

(a) Pit head generating stations - 0.2%

(b) Non-pit head generating stations - 0.8%

The above norms shall be applicable for all types of coal, i.e., domestic coal, washed coal and imported coal.

Provided that for procurement of coal on delivery basis, no transit and handling loss shall be allowed.

41 Operation and maintenance expenses

41.1 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

three (3) years ending March 31, 2009, 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, 2008 and shall be escalated based on the escalation factor as approved by the Commission for the respective years to arrive at operation and maintenance expenses for the base year commencing April 1, 2011.
- c) The O&M expenses for each subsequent year will be determined by escalating the base expenses determined above for FY 2010-11, at the escalation factor 5.72% to arrive at permissible O&M expenses for each year of the Control Period.

Provided that in case, an existing generating station has been in operation for less than three (3) years as at on the date of effectiveness of these Regulations, the O&M Expenses shall be as specified at Regulation 42.2 for New Generating Stations

42 New Generating Stations:

- a) For coal based generating stations:

Rs. Lakh/MW

Particulars	200/210/250 MW Sets	500 MW and above Sets
FY 2011-12	14.81	13.32
FY 2012-13	15.66	14.08
FY 2013-14	16.55	14.89
FY 2014-15	17.50	15.74
FY 2015-16	18.50	16.64

Note:

For the generating stations having combination of 200/210/250 MW sets and 500 MW and above sets, the weighted average value for operation and maintenance expenses shall be adopted.

- b) For lignite based generating stations:

Rs. Lakh/MW

Particulars	Lignite based Unit/Stations
FY 2011-12	14.81
FY 2012-13	15.66
FY 2013-14	16.55
FY 2014-15	17.50
FY 2015-16	18.50

- c) Gas Turbine/Combined Cycle generating stations

Particulars	Gas Turbine/Combined Cycle Generating Stations		Small Gas Turbine Generating Stations (less than 50 MW unit size)
	With warranty spares for 10 years	Without warranty Spares	Without warranty Spares
FY 2011-12	7.41	11.10	13.47
FY 2012-13	7.83	11.74	14.24
FY 2013-14	8.28	12.41	15.05
FY 2014-15	8.75	13.12	15.91
FY 2015-16	9.25	13.87	16.83

43 Norms of operation for Hydro Generating Stations

The norms of operation shall be as under, namely:

- 43.1 Normative Plant Availability Factor (NAPAF) index for recovery of annual fixed charges

Particulars	Normative Plant Availability Factor
Storage and Pondage type plants with head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) of up to 8%, and where plant availability is not affected by silt	90%
Storage and Pondage type plants with head variation between FRL and MDDL of more than 8%, where plant availability is not affected by silt	Plant-specific allowance to be provided in NAPAF for reduction in MW output capability as reservoir level falls over the months. As a general guideline the allowance on this account in terms of a multiplying factor may be worked out from the projection of annual average of net head, applying the formula: $(\text{Average head} / \text{Rated head}) + 0.02$ Alternatively in case of a difficulty in making such projection, the multiplying factor may be determined as: $(\text{Head at MDDL} / \text{Rated head}) \times 0.5 + 0.52$
Pondage type plants where plant availability is significantly affected by silt	85%

Run-of-river type plants	To be determined plant-wise, based on 10-day design energy data, moderated by past experience where available/relevant
--------------------------	------------------------------------------------------------------------------------------------------------------------

43.2 Auxiliary Energy Consumption

- (a) Surface hydro electric power generating stations
 - i. With rotating exciters mounted on the generator shaft - 0.7%
 - ii. With static excitation system: 1%
- (b) Underground hydro generating station
 - i. With rotating exciters mounted on the generator shaft - 0.9%
 - ii. With static excitation system: 1.2%

43.3 Transformation losses

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

44 Operation and Maintenance Expenses for Hydro Generating Stations

44.1 For Existing Stations:

- (1) The normative O&M expenses for the second Control Period will be derived on the basis of the average of the actual O&M expenses for the three (3) years ending March 31, 2009, based on the audited financial statements, excluding abnormal O&M expenses, if any, subject to prudence check by the Commission.
- (2) The average of such O&M expenses will be considered as the expenses for the financial year ended March 31, 2008, which will be escalated based on the escalation factor as approved by the Commission for the respective years to arrive at O&M expenses for the base year commencing April 1, 2011.
- (3) The O&M expenses for each subsequent year will be determined by escalating the base expenses determined above for FY 2010-11, at the escalation factor of 5.72% to arrive at permissible O&M expenses for each year of the Control Period.

44.2 For New Stations:

- (1) O&M expenses for first year of operation will be specified as 2% of the original project cost (excluding cost of rehabilitation and resettlement works) for the first year of operation.

- (2) The O&M expenses for each subsequent year will be determined by escalating the base expenses determined above, at the escalation factor of 5.72%.

45 Computation and Payment of Annual Fixed Charges and Energy Charges for Thermal Generating Stations

A. Annual Fixed Charges

- 45.1 The total Annual Fixed Charges shall be computed based on the norms specified under these Regulations and recovered on monthly basis.
- 45.2 The full Annual Fixed Charges shall be recoverable at target availability specified in Regulation 40.1. Recovery of Annual Fixed Charges below the level of Target Availability will be on pro rata basis. At zero Availability, no Capacity Charges shall be payable.
- 45.3 Payment of Annual Fixed Charges shall be on monthly basis in equal instalments in proportion to contracted capacity subject to adjustment at the end of the year with respect to Target Availability.

B. Energy Charges

- 45.4 The Energy (variable) Charges shall cover landed fuel costs and shall be computed as follows:

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

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

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

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

Where, P_p = Price of primary fuel namely coal or lignite or gas or liquid fuel and lime stone, if applicable, in Rs/kg or Rs/cum or Rs/litre, as the case may be.

$(Q_p)_n$ = Quantity of primary fuel required for generation of one kWh of electricity at generator terminals in kg or litre or cum, as the case may be, and shall be computed on the basis of normative Gross Station Heat Rate (less heat contributed by

secondary fuel oil for coal/lignite based generating stations) and gross calorific value of coal/lignite or gas or liquid fuel as fired.

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

$(Q_s)_n$ = Normative Quantity of Secondary fuel oil in ml/kWh as per Regulation 40.4, as the case may be, and

AUX_n = Normative Auxiliary Energy Consumption as % of gross generation as per Regulation 40.5), as the case may be.

Energy Charges, for the purpose of billing/Fuel Surcharge will be worked out station-wise based on weighted average rate based on actual generation from the Units of each Station

45.6 Adjustment of rate of energy charge (REC) [Fuel Surcharge Adjustment] on account of variation in price or heat value of fuels

Any variation in Price and Gross Calorific Value of coal/lignite or gas or liquid fuel vis-a-vis approved values shall be adjusted on month to month basis on the basis of average Gross Calorific Value of coal/lignite or gas or liquid fuel in stock, received and burnt and weighted average landed cost incurred by the Generating Company for procurement of coal/lignite, oil, or gas or liquid fuel, as the case may be for a power station. In its bills, the Generating Company shall indicate rate of energy charges at base price of primary and secondary fuel specified by the Commission and the Fuel Surcharge to it separately. The Generating Company should submit the computation to the Commission on six-monthly basis for post-facto approval of Fuel Surcharge adjustment.

45.7 Landed Cost of fuel

The landed cost of fuel shall include price of fuel corresponding to the grade/quality/calorific value of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/road/gas pipe line or any other means, and, for the purpose of computation of energy charges, shall be arrived at after considering normative transit and handling losses as percentage of the quantity of fuel dispatched by the fuel supply company during the month as specified in Regulation 45.5.

C. Incentive

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

Provided that the actual generation shall also consider the generation loss on account of any backing down instruction from the Maharashtra State Load Despatch Centre.

The Incentive amount shall be computed and billed on monthly basis based on the cumulative Plant Load Factor till the respective month in a Year, subject to adjustment at the end of the year.

46 Computation and Payment of Capacity Charges and Energy Charges for Hydro Generating Stations

46.1 The Annual Fixed Charges of a Hydro Generating Station shall be computed on annual basis, based on norms specified under these Regulations, and recovered on monthly basis under capacity charge (inclusive of incentive) and Energy Charge, which shall be payable by the beneficiaries in proportion to their respective share in the capacity of the generating station.

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

$$AFC \times 0.5 \times NDM / NDY \times (PAFM / NAPAF) \text{ (in Rupees)}$$

Where,

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

NAPAF = Normative plant availability factor in percentage

NDM = Number of days in the month

NDY = Number of days in the year

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

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

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

$$i = 1$$

Where,

AUX = Normative auxiliary energy consumption in percentage

DC_i = Declared capacity (in ex-bus MW) for the ith day of the month which the station can deliver for at least three (3) hours, as certified by the Maharashtra State Load Despatch Centre after the day is over.

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

N = Number of days in the month

13.1 The Energy Charge shall be payable by every beneficiary for the total energy supplied to the beneficiary, during the calendar month, on ex-power plant basis, at

the computed Energy Charge rate. Total Energy Charge payable to the Generating Company for a month shall be :

(Energy Charge Rate in Rs. / kWh) x { Energy (ex-bus)} for the month in kWh

- 46.4 Energy Charge Rate (ECR) in Rupees per kWh on ex-power plant basis, for a Hydro Generating Station, shall be determined up to three decimal places based on the following formula:

$$\text{ECR} = \text{AFC} \times 0.5 \times 10 / \{ \text{DE} \times (100 - \text{AUX}) \}$$

Where,

DE = Annual Design Energy specified for the hydro generating station, in MWh, subject to the provision in Regulation 46.6 below.

- 46.5 In case actual total energy generated by a Hydro Generating Station during a year is less than the Design Energy for reasons beyond the control of the Generating Company, the following treatment shall be applied on a rolling basis:

- (i) in case the energy shortfall occurs within ten years from the date of commercial operation of a generating station, the ECR for the year following the year of energy shortfall shall be computed based on the formula specified in Regulation (46.5) with the modification that the DE for the year shall be considered as equal to the actual energy generated during the year of the shortfall, till the Energy Charge shortfall of the previous year has been made up, after which normal ECR shall be applicable;

- (ii) in case the energy shortfall occurs after ten years from the date of commercial operation of a generating station, the following shall apply:

Suppose the specified annual Design Energy (DE) for the station is DE MWh, and the actual energy generated during the concerned (first) and the following (second) financial years is A1 and A2 MWh, respectively, A1 being less than DE. Then, the design energy to be considered in the formula in Regulation (46.5) of these Regulations for calculating the ECR for the third financial year shall be moderated as (A1 + A2 – DE) MWh, subject to a maximum of DE MWh and a minimum of A1 MWh.

- (iii) Actual energy generated (e.g., A1, A2) shall be arrived at by multiplying the net metered energy sent out from the station by 100 / (100 – AUX).

- 46.6 In case the Energy Charge Rate (ECR) for a hydro generating station, as computed in Regulation 13.5 above, exceeds eighty paise per kWh, and the actual saleable energy in a year exceeds { DE x (100 – AUX) / 10000 } MWh, the Energy Charge for the energy in excess of the above shall be billed at eighty paise per kWh only:

Provided that in a year following a year in which total energy generated was less than the design energy for reasons beyond the control of the Generating Company, the Energy Charge Rate shall be reduced to eighty paise per kWh after the energy charge shortfall of the previous year has been made up.

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

47 Demonstration of declared capacity

- 47.1 The Generating Company may be required to demonstrate the declared capacity of its generating station as and when asked by the Maharashtra State Load Despatch Centre. In the event of the Generating Company failing to demonstrate the declared capacity, the capacity charges due to the Generating Company shall be reduced as a measure of penalty.
- 47.2 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 in the year, the penalty shall be multiplied in the geometrical progression.
- 47.3 The operating logbooks of the generating station shall be available for review by the Maharashtra State Load Despatch Centre, as the case may be. These books shall keep record of machine operation and maintenance.

48 Billing and Payment of Charges

- 15.1 The Billing and Payment of Annual Fixed Charges, Energy Charges, Fuel Surcharge Adjustments and Incentive for Thermal Generating Stations shall be done on a monthly basis subject to adjustments at the end of the year.
- 15.2 The Billing and Payment of Capacity Charges and Energy Charges for Hydro Generating Stations shall be done on a monthly basis.

PART G: TRANSMISSION

49 Applicability

- 49.1 The Regulations contained in this Part shall apply in determining tariffs for access 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 on the basis of Business Plan and application for determination of Aggregate Revenue Requirement submitted by the Transmission Licensees at the beginning of the Control Period with reasonable opportunities for improvement in performance, if any.

Provided further that in case a new transmission system set up by a new Transmission Licensee is added to the existing system before the end of the Control Period, the Commission shall re-determine the tariff for the remaining years of the Control Period having regard to the annual performance of such transmission system and on the basis of Business Plan and application for determination of Aggregate Revenue Requirement submitted by such Transmission Licensees for the remaining years of the Control Period.

- 49.2 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.

50 Components of tariff

- 50.1 The transmission charges for access to and use of the intra-State transmission system shall comprise any of the following components or a combination of the following components:

- (a) transmission system access charges;
- (b) annual transmission charges;
- (c) per unit charges for energy transmitted; and
- (d) reactive energy charges.

Transmission system access charges

- 50.2 Any person who is eligible to apply for access to the intra-State transmission system shall be entitled to obtain such access in accordance with the MERC (Transmission Open Access) Regulations, 2005, as amended from time to time 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.

- 50.3 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.
- 50.4 Where the access of the intending Transmission System User entails other works, not covered under Regulation 50.2, relating to the intra-State transmission system, the Transmission Licensee shall recover the expenses relating to such works through annual transmission charges for each year of the Control Period, in accordance with Regulation 50.10 below:
- 50.5 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.
- 50.6 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:
- 50.7 Where the Transmission System User has paid for the works carried out to provide him access to the intra-State transmission system, 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.
- 50.8 The transmission system access charges may be recovered by 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; or
 - (c) As any combination of (a) and (b) above.
- 50.9 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 adjudication or to such other forum as may be stipulated.

Annual transmission charges for each year of the Control Period

- 50.10 The annual transmission charges for each financial year of the Control Period shall provide for the recovery of the aggregate revenue requirement of the Transmission Licensee for the respective financial year of the Control Period, 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 capital employed (ROCE);
- (b) Depreciation;
- (c) Operation and maintenance expenses;
- (d) Interest on working capital and deposits from Transmission System Users; and
- (e) Adjustment of contribution to contingency reserves.

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

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

Provided that in case of competitively awarded transmission system projects in pursuance of Section 63 of the Act and in accordance with guidelines for competitive bidding for transmission, the annual transmission charges shall be as per the annual Transmission Service Charges (TSC) quoted by such competitively awarded transmission projects.

- 50.11 The annual transmission charges of the Transmission Licensee shall be determined by the Commission on the basis of an application for determination of aggregate revenue requirement or application for adoption of annual transmission charges in case of competitively awarded transmission system project, as the case may be, made by the Transmission Licensee in accordance with Part C of these Regulations.

51 Multi-year tariffs

- 51.1 Except where exempted by the Commission, the Regulations contained in Part C of these Regulations shall apply to all Transmission Licensees and Transmission System Users in the State with effect from April 1, 2011.

52 Financial Principles

- 52.1 Except where exempted by the Commission, the Regulations contained in Part E of these Regulations shall apply to all Transmission Licensees in the State with effect from April 1, 2011.

53 Business Plan

- 53.1 Each Transmission Licensee shall submit a Business Plan with full details as stipulated by the Commission from time to time, in the manner as specified in Part B of these Regulations.

54 Capital Investment Plan

54.1 The Transmission Licensee shall submit a Capital Investment Plan with full details of his proposed capital expenditure projects to the Commission for approval along with the Business Plan:

Provided that the Capital Investment Plan shall be submitted for each year of the second Control Period.

54.2 The Capital 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.

54.3 The Capital Investment Plan shall cover all capital expenditure projects of a value exceeding Rs. Ten (10) crore and shall be in such form as may be stipulated by the Commission from time to time.

54.4 The Capital Investment Plan shall be accompanied by such information, particulars and documents as may be required including but not limited to the information such as number of bays, name, configuration and location of grid substations, substation capacity (MVA), transmission line length (ckt-km) showing the need for the proposed investments, alternatives considered, cost/benefit analysis and other aspects that may have a bearing on the transmission charges.

54.5 The Capital 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 MERC (Transmission Open Access) Regulations, 2005 as amended from time to time.

54.6 The Commission shall review the Capital Investment Plan along with the Business Plan submitted by the Transmission Licensee taking into consideration the prudence of the proposed expenditure and estimated impact on transmission charges in accordance with the Regulations 7.

54.7 The Transmission Licensee shall submit, along with the application for determination of Aggregate Revenue Requirement or along with the application for Mid-term 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.

55 Capital Cost

55.1 For the purpose of determination of tariff, the Capital Cost for a Transmission Project and additional capitalisation thereof, shall be allowed in accordance with the provisions outlined under Regulation 26 and Regulation 27 respectively.

55.2 The provisions of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India, as amended from time to time, 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.

55.3 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 Regulated Rate Base as provided in Regulation 29.

56 Norms for operation

56.1 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 and to be certified by Maharashtra State Load Despatch Centre.

56.2 The Transmission Licensee shall be entitled to incentive on achieving annual availability beyond the target availability, in accordance with the following formula:

Incentive = Annual Transmission Charges x [Annual availability achieved – Target Availability] / Target Availability;

Where,

Annual transmission Charges shall correspond to Aggregate Revenue Requirement for each year of the Control Period for the particular transmission licensee within the State, as the case may be:

Provided that no incentive shall be payable above the availability of 99.75% for AC system and 98.5% for HVDC system:

Provided further that the computation of incentive/disincentive shall be undertaken during mid-term performance review and at the end of Control Period.

57 Calculation of Aggregate Revenue Requirement

57.1 Aggregate Revenue Requirement of transmission licensee shall comprise of following components, viz.,

- a) Return on capital employed (ROCE);
- b) Depreciation;
- c) Operation and maintenance expenses;
- d) Interest on working capital and deposits from Transmission System Users; and
- e) Adjustment of contribution to contingency reserves.

Less

- f) Non-tariff income; and
- g) Income from Other Business, to the extent specified in these Regulations.

57.2 Return on Capital Employed

57.2.1 The Transmission Licensee shall be allowed a return on capital employed as specified in Regulation 29 of these Regulations.

57.3 Depreciation

57.3.1 The Transmission Licensee shall be permitted to recover depreciation on the value of fixed assets used in the Transmission Business as specified in Regulation 30 of these Regulations.

57.4 Operation and Maintenance expenses

57.4.1 The norms for O&M expenses for existing and new transmission licensees have been stipulated for the Control Period on the basis of circuit kilometre of transmission lines and number of bays in the substation of the transmission licensee, as given below:

Explanation: For the purpose of deriving normative O&M expenses under these Regulations, the 'Bay' shall mean a set of accessories that are required to connect an electrical equipment such as Transmission Line, Bus Section Breakers, Potential Transformers, Power Transformers, Capacitors and Transfer Breaker and the feeders emanating from the bus at Sub-station of Transmission Licensee. Further, the Bays referred herein shall include only the Bays at the Transmission substation and shall exclude any bays of the Generating Station switchyard whose maintenance is usually the responsibility of the Generating Company.

57.5 Existing Transmission Licensee

Maharashtra State Electricity Transmission Company Ltd. (MSETCL)

Voltage Level	Ist year of Control Period (FY 2011-12)	2 nd year of Control Period (FY 2012-13)	3rd year of Control Period (FY 2013-14)	4th year of Control Period (FY 2014-15)	5th year of Control Period (FY 2015-16)
Rs Lakh/ckt km					
HVDC (Rs lakh)	1492	1577	1667	1763	1863
765 kV	0.64	0.68	0.72	0.76	0.80
400 kV	0.46	0.48	0.51	0.54	0.57
>66 kV & <400 kV	0.18	0.19	0.20	0.22	0.23
66 kV and less	0.11	0.12	0.12	0.13	0.14
Rs Lakh/bay					
765 kV	121.35	128.29	135.63	143.39	151.59
400 kV	86.69	91.65	96.89	102.43	108.29
>66kV & <400 kV	12.56	13.28	14.04	14.85	15.69

Voltage Level	Ist year of Control Period (FY 2011-12)	2 nd year of Control Period (FY 2012-13)	3rd year of Control Period (FY 2013-14)	4th year of Control Period (FY 2014-15)	5th year of Control Period (FY 2015-16)
66 kV and less	2.63	2.78	2.93	3.10	3.28

Tata Power Company-Transmission (TPC-T)

Voltage Level	Ist year of Control Period (FY 2011-12)	2 nd year of Control Period (FY 2012-13)	3rd year of Control Period (FY 2013-14)	4th year of Control Period (FY 2014-15)	5th year of Control Period (FY 2015-16)
Rs Lakh/ckt km					
>66kV<&400 kV	1.08	1.14	1.21	1.28	1.35
Rs Lakh/bay					
>66kV<&400 kV	31.58	33.38	35.29	37.31	39.45
66 kV and less	6.60	6.98	7.38	7.80	8.24

Reliance Infrastructure Ltd.-Transmission (RInfra-T)

Voltage Level	Ist year of Control Period (FY 2011-12)	2 nd year of Control Period (FY 2012-13)	3rd year of Control Period (FY 2013-14)	4th year of Control Period (FY 2014-15)	5th year of Control Period (FY 2015-16)
Rs Lakh/ckt km					
>66 kV<&400 kV	0.33	0.35	0.37	0.39	0.41
Rs Lakh/bay					
>66 kV<&400 kV	15.42	16.30	17.23	18.22	19.26
66kV and less	3.22	3.41	3.60	3.81	4.03

57.6 O&M Norms for New Transmission Licensee

- 57.6.1 For the new transmission licensees, the year-wise O&M norms as stipulated for MSETCL shall be the applicable norms for transmission assets added by such new transmission licensee(s) for respective year during the next Control Period.

Provided that the same shall not be applicable to those new projects, which are awarded on a competitive bidding basis.

Explanation: The term "New Transmission Licensee" shall mean the transmission licensee(s) for which transmission licence is granted by the Commission prior to or after the date of effectiveness of these Regulations, and whose transmission project assets are commissioned after March 31, 2010.

57.7 Interest on working capital

- 57.7.1 The Transmission Licensee shall be allowed interest on the estimated level of working capital, as specified in Regulation 31 of these Regulations.

57.8 Adjustment of Contribution to Contingency Reserves

- 57.8.1 The Transmission Licensee shall be allowed an adjustment in Aggregate Revenue Requirement with regards to Contingencies Reserve, as specified in Regulation 32 of these Regulations.

58 Non-Tariff Income

- 58.1 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 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 along with its application for determination of aggregate revenue requirement.

59 Income from Other Business

- 59.1 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, no amount shall be allowed to be added to the aggregate revenue requirement of the Transmission Licensee on account of such Other Business.

60 Determination of Intra-State Transmission Tariff

60.1 Determination of TTSC

- 60.1.1 The aggregate of the yearly revenue requirement for all Transmission licensees; less the deductions, as approved by the Commission over the Control Period, shall form

the “Total Transmission System Cost” of the Intra-State transmission system, to be recovered from the Transmission System Users (TSUs) for the respective year of the Control Period, in accordance with the following Formula:

$$TTSC_{(t)} = \sum_{i=1}^n (ARR_i - NT_i - O_i) - STR_{(t-1)}$$

Where,

$TTSC_{(t)}$ = Pooled Total Transmission System Cost of year (t) of the Control Period

n = Number of Transmission Licensee(s)

ARR_i = Yearly revenue requirement approved by the Commission for i^{th} Licensee for the yearly period (t) of the Control Period

NT_i = Approved level of non-tariff income for i^{th} Licensee for the yearly period (t) of the Control Period

O_i = Approved level of income from other business of the i^{th} Licensee for the yearly period (t) of the Control Period

$STR_{(t-1)}$ = Revenue from short term open access charges earned during previous yearly period (t-1).

Provided that the revenue from short term open access charges for each yearly period (t) of Control Period shall be taken same as that prevalent during the yearly period before commencement of the Control Period. However, the adjustments due to variation in actual revenue from short term open access charges shall be undertaken during mid-term review and at the end of Control Period.

60.2 Base Transmission Capacity Rights

60.2.1 The Commission shall approve yearly ‘Base Transmission Capacity Rights’ as average of Co-incident Peak Demand and Non-Coincident Peak Demand for TSUs as projected for 12 monthly period of each year (t) of the Control Period, representing the “Capacity Utilisation” of Intra-State transmission system and accordingly determine yearly ‘Base Transmission Tariff’ for the same.

Base Transmission Capacity

Rights (Base TCR) for the yearly period (t) $= \sum_{u=1}^n ((CPD(t) + NCPD(t))/2)$

Where,

$CPD_{(t)}$ = Average of projected monthly Coincident Peak Demand for the yearly period (t) of Control Period for each long term Transmission System User (u)

$NCPD_{(t)}$ = Average of projected monthly Non-Coincident Peak Demand for the yearly period (t) of Control Period for each long term Transmission System User (u)

Provided that for the first year of the Control Period, the Base Transmission Capacity Rights for all long term Transmission System Users shall be determined based on average monthly CPD and NCPD of the long term TSUs prevalent during the 12 months prior to date of effectiveness of these Regulations.

Provided further that the yearly CPD and NCPD to be considered for determination of the subsequent yearly Base Transmission Capacity Rights shall be computed at the beginning of the Control Period based on the past trend and on the basis of demand projections made by various long term TSUs connected to the Intra-State transmission system as part of their Business Plans.

Provided further that on completion of the each year of the Control Period, SLDC shall submit the recorded CPD and NCPD data for past 12 monthly periods in respect of each long term Transmission System User and on the basis of the same, the Base TCR shall be suitably revised at the time of mid-term performance review and at the end of the Control Period.

60.3 Base Transmission Tariff

60.3.1 Base Transmission Tariff for each financial year shall be determined as ratio of approved 'TTSC' for intra-State transmission system and approved 'Base Transmission Capacity Rights' and shall be denominated in terms of "Rs/kW/month" (for long term/medium term usage) or in terms of "Rs/kWh" (for short term bilateral open access transactions usage, short term collective transactions over power exchange and for Renewable energy transactions) in following manner:

Base Transmission Tariff _(t) (long term/medium term) (Rs/kW/month or Rs/MW/day)	$= \text{TTSC}_{(t)} / \sum_{u=1}^n ((\text{CPD}(t) + \text{NCPD}(t)) / 2)$
-----------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------

Base Transmission Tariff _(t) (Short term) (Rs/kWh)	$= \frac{\text{TTSC}_{(t)}}{\sum_{i=1}^n (\text{Energy Transmitted by Tx } i)}$
------------------------------------------------------------------	---------------------------------------------------------------------------------

Where,

TTSC_(t) = Pooled cost for InSTS for yearly period (t) of the Control Period

CPD_(t) = Average of monthly Coincident Peak Demand of the long term Transmission System User (u) for the yearly period (t) of Control Period

NCPD_(t) = Average of monthly Non-Coincident Peak Demand of the long term Transmission System User (u) for the yearly period (t) of Control Period

n = Total number of Transmission Licensee(s) in that particular year of Control Period

$Tx_i = i^{\text{th}}$ Transmission Licensee

Provided that the energy units transmitted by each transmission licensee shall be based on the projections made by each transmission licensee as part of its Business Plan and as approved by the Commission.

Provided further that any revisions in Base Transmission Capacity Rights and Base Transmission Tariff as determined in the Regulations 45.2 and 45.3 due to the variation in the actual and approved CPD and NCPD or due to addition of new transmission licensees to the system shall be made at the time of mid-term performance review and at the end of the Control Period.

61 Sharing of TTSC by long term TSUs

61.1 The Transmission System Users shall share the TTSC of the intra-State transmission system in such proportion as the ratio of base transmission capacity rights of each Transmission System User to the total base transmission capacity rights allotted in the intra-State transmission system:

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

$$ATC(u)_{(t)} = TTSC_{(t)} \times ([Base\ TCR(u)]_{(t)} / \sum_{i=1}^n [Base\ TCR(u)]_{(t)})$$

Where,

$ATC(u)_{(t)}$ = Annual Transmission Charges to be shared by long term Transmission System User (u).

$Base\ TCR(u) = [CPD(u)_{(t)} + NCPD(u)_{(t)}] / 2$

Base TCR represents the Base Transmission Capacity Right of each long term Transmission System User (u) for the yearly period (t).

$CPD(u)_{(t)}$ = Average Co-incident Peak Demand of the long term Transmission System User (u) for the yearly period (t).

$NCPD(u)_{(t)}$ = Average Non-coincident Peak Demand of the long term Transmission System User (u) for the yearly period (t).

62 Usage of Intra-State Transmission System

62.1 For the purpose of use of intra-State transmission system within Maharashtra, the open access transactions may be classified as under:

- a) Long term access: For period exceeding 7 years but not exceeding 25 years.
- b) Medium term access: For period exceeding 1 year but not exceeding 7 years.
- c) Short term access: For Period upto 1 year.

Provided that in case of congestion, the short term open access transactions shall be curtailed first followed by medium term, followed by long term. Amongst the particular category of customers, the curtailment shall be carried out on pro-rata basis subject to the condition that within a particular category, the transactions exceeding the schedule shall be curtailed first upto its scheduled requirement before applying the rule of 'pro-rata' curtailment.

- 62.2 No distinction in charges shall exist in terms of long term, medium term or short term access to the intra-State Transmission System:

Provided that, the transactions for long term and medium term shall be denominated in Rs/kW/month or any suitable denomination as may be stipulated by the Commission, derived from transmission tariff for long term/medium term access as specified in the Regulation 45.3.

- 62.3 The transmission tariff for short term bilateral transactions and short term collective transactions through power exchanges and for renewable energy transactions shall be denominated in Rs/kWh (per unit basis) considering energy units (MU) projected to be handled by the intra-State transmission system (InSTS) for the ensuing year as specified in Regulation 45.3.

- 62.4 The charges for intra State transmission usage shall be shared among various TSUs in the following manner:

- Existing long term TSU with recorded demand upto Base TCR (i.e., average of CPD and NCPD) shall not be subjected to payment of short term transmission charges.
- Long term TSU with recorded demand greater than Base TCR but lower than Contracted Capacity shall make payment of short term Transmission charges for the recorded demand in excess of Base TCR.
- Where the recorded demand of long term TSU is greater than Contracted Capacity (termed as Transmission Capacity Right - TCR), the TSU shall bear additional transmission charges as specified in MERC (Transmission Open Access) Regulations, 2005, as amended from time to time.

63 Payment Modalities and Payment Security

- 63.1 State Transmission Utility (STU) shall raise monthly bill for Intra-State Transmission Charges on every Transmission System User (TSU) on 1st working day of the Month for the Transmission Charges of preceding month.
- 63.2 The monthly bill for transmission tariff for each calendar month shall be payable on 14th day of subsequent calendar month by the TSUs.
- 63.3 All TSUs shall ensure timely payment of Transmission Tariff to STU so as to enable STU to make timely settlement of claims raised by transmission licensees.
- 63.4 Where there is delay in payment by any TSU, late payment surcharge at the rate of 1.25% per month or part thereof shall be applicable.

64 Transmission losses

- 64.1 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 in proportion to their usage of the intra-State transmission system:

Provided that the Commission may stipulate a trajectory for transmission losses in accordance with Regulation 9 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 mid-term performance review, in accordance with the mechanisms provided in Regulation 10.

65 Reactive Energy Charges

65.1 A generating station shall inject/absorb the reactive energy in to the grid as per the directions of State Load Despatch Centre. Such injection/absorption may be undertaken on the basis of machine capability and in accordance with the directions issued by SLDC. Reactive energy exchange, only if, made as per the directions of State Load Despatch Centre, for the applicable duration (injection or absorption) shall be levied/compensated to the generating station at rate of 10.00 paise/kVArh for FY 2010-11 escalated at 0.5 paise/kVArh annually in subsequent years of the Control Period, unless otherwise revised by Commission.

65.2 The Transmission Licensees and the Transmission System Users shall be subjected to the following Incentive/Disincentive for maintaining the reactive energy balance in the transmission system:

Party responsible for reactive energy compensation	Threshold performance	Voltage at Interchange point (V_p)	Rate for compensation
Transmission Licensees	Permissible voltage variation as per IEGC/State Grid Code.	<ul style="list-style-type: none"> - If $V_p > 103\%$ of V_{nom} - If $V_p < 97\%$ of V_{nom} - If $97\% < V_p < 103\%$ 	<ul style="list-style-type: none"> - Penalty at the rate of Rs 0.10/RkVAh for additional injection. - Incentive at the rate of Rs 0.10/RkVAh for additional injection. - Nil
TSU (Distribution Licensee / OA Users directly connected to State transmission network)	Maximum reactive energy drawal at each interchange point to be limited corresponding to power factor of 0.9	<ul style="list-style-type: none"> - If $V_p > 103\%$ of V_{nom} - If $V_p < 97\%$ of V_{nom} - If $97\% < V_p < 103\%$ 	<ul style="list-style-type: none"> - Incentive at the rate of Rs 0.10/RkVAh for additional drawal. - Penalty at the rate of Rs 0.10/RVKAh for additional drawal. - Nil

Where,

V_p = Voltage at the Interchange point

V_{nom} = Nominal Value of Voltage

PART H: DISTRIBUTION WIRES BUSINESS

66 Separation of accounts

66.1 Every Distribution Licensee shall make a separate application for determination of tariff for-

- (a) Distribution Wires Business;
- (b) Retail Supply of electricity;

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

67 Applicability

67.1 The Regulations contained in this Part shall apply in determining tariff payable for usage of distribution wires of a Distribution Licensee by a Distribution System User.

68 Components of Aggregate Revenue Requirement for Distribution Wires Business

68.1 The wheeling charges for Distribution Wires Business of the Distribution Licensee shall provide for the recovery of the Aggregate Revenue Requirement, as provided in Regulation 73 of these Regulations and shall comprise the following:

Aggregate Revenue Requirement:

- (a) Return on Capital Employed;
- (b) Depreciation;
- (c) Operation and maintenance expenses;
- (d) Interest on working capital and deposits from consumers and Distribution System Users; and
- (e) Adjustment of Contribution to contingency reserves.

Wheeling charges = Aggregate Revenue Requirement, as above, minus:

- (f) Non-tariff income; and
- (g) Income from Other Business, to extent specified in these Regulations, and
- (h) Receipts on account of additional surcharge on charges of wheeling.

68.2 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 C** of these Regulations.

Provided that the Wheeling Charges may be denominated in terms of Rupees/kWh or Rupees/kW/month, for the purpose of recovery from the Distribution System User, or any such denomination, as stipulated by the Commission from time to time.

69 Multi-Year Tariffs

- 69.1 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, 2011.

70 Business Plan

- 70.1 The Distribution Licensee shall submit a Business Plan with full details as stipulated by the Commission from time to time, in the manner as specified in Part B of these Regulations.

71 Capital Investment Plan

- 71.1 The Distribution Licensee shall submit an Capital Investment Plan with full details of his proposed capital expenditure projects to the Commission for approval, as a part of the Business Plan:
- 71.2 The Capital Investment Plan shall cover all capital expenditure projects of a value exceeding Rs. Ten (10) Crore and shall be in such form as may be stipulated by the Commission from time to time.
- 71.3 The Distribution licensee shall submit the Capital Investment Plan in accordance with Regulation 7 of these Regulations.
- 71.4 The Commission shall approve the Business Plan in accordance with the principles specified in these Regulations.

72 Capital cost

- 72.1 The approved Business 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, 2011 with a value exceeding Rs. Ten (10) crore.
- 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.
- 72.3 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.
- 72.4 The capital cost shall be allowed as provided in Regulation 26.
- 72.5 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 Regulated Rate Base, as provided in Regulation 30.

73 Calculation of Aggregate Revenue Requirement

73.1 Return on Capital Employed

- 73.1.1 The Distribution Licensee shall be allowed a return on capital employed on Distribution Wires Business, as specified in Regulation 29 of these Regulations.

73.2 Depreciation

73.2.1 The Distribution Licensee shall be permitted to recover depreciation on the value of fixed assets used in the Distribution Business as specified in Regulation 30 of these Regulations.

73.3 Operation and Maintenance expenses

73.3.1 The Distribution Licensee shall be permitted to recover Operation and Maintenance expenses relating to the Distribution Wires Business as per the Norm specified below for each year of the Control Period:

FY 2011-12

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
For Wheeled Energy (Paise/kWh)	11	10	10	11	11
For Consumers in Wires Business* (Rs Lakh/'000 Consumer)	6	10	10	NA	6
For GFA of Wires Business (% of Opening GFA)	4.05%	4.05%	4.05%	1.35%	4.05%

FY 2012-13

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
For Wheeled Energy (Paise/kWh)	10	9	9	12	10
For Consumers in Wires Business* (Rs Lakh/'000 Consumer)	6.50	10.06	10.06	NA	6.50
For GFA of Wires Business (% of Opening GFA)	4.05%	4.05%	4.05%	1.35%	4.05%

FY 2013-14

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
For Wheeled Energy (Paise/kWh)	8	7	7	13	8
For Consumers in Wires Business* (Rs Lakh/'000 Consumer)	6.9	10.6	10.6	NA	6.9
For GFA of Wires Business (% of Opening GFA)	4.05%	4.05%	4.05%	1.35%	4.05%

FY 2014-15

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
For Wheeled Energy (Paise/kWh)	7	5	5	13	7
For Consumers in Wires Business* (Rs Lakh/'000 Consumer)	7.3	11.2	11.2	NA	7.3
For GFA of Wires Business (% of Opening GFA)	4.05%	4.05%	4.05%	1.35%	4.05%

FY 2015-16

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
For Wheeled Energy	5	4	4	14	5

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
(Paise/kWh)					
For Consumers in Wires Business* (Rs Lakh/'000 Consumer)	7.7	11.9	11.9	NA	7.7
For GFA of Wires Business (% of Opening GFA)	4.05%	4.05%	4.05%	1.35%	4.05%

Note: *Consumers using Wires Business indicates consumers using distribution network of a Distribution Licensee. For Example, for RInfra-D: It would cover RInfra-D consumers who use wires as well as supply services of RInfra-D, and TPC-D consumers using RInfra-D's wires network only for wheeling of electricity.

73.4 Interest on working capital

73.4.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital, as specified in Regulation 31 of these Regulations.

73.5 Adjustment of Contribution to contingency reserves

73.5.1 Contingency Reserve of the Distribution Licensee shall be adjusted in Revenue Gap determination, as specified in Regulation 32 of these Regulations.

74 Non-Tariff Income

74.1 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 Distribution Wires Business 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 wheeling charges.

75 Income from Other Business

75.1 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 Distribution Wires Business 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 wheeling charges:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceed the revenues from such Other Business, no amount shall be allowed to be added to the Aggregate Revenue Requirement of the Distribution Licensee on account of such Other Business.

76 Determination of Wheeling Charges

76.1 The Commission shall specify the wheeling charge of Distribution Wires Business 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 H may comprise any combination of fixed/demand charges, and variable charges, as may be stipulated by the Commission in such Order.

77 Receipts on account of Additional surcharge

77.1 The amount received by the Distribution Licensee by way of additional surcharge on charges of Distribution Wires Business, as approved by the Commission in accordance with the Maharashtra Electricity Regulatory Commission (Distribution Open Access) Regulations, 2005, as amended from time to time, from consumers connected to wires of the Distribution Licensee, shall be deducted from the aggregate revenue requirement in calculating the wheeling charges of such Distribution Licensee.

78 Wheeling losses

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

Provided that the Commission may stipulate a trajectory for wheeling losses in accordance with Regulation 7 as part of the Order on the Business Plan filed by the Distribution Licensee:

Provided that any variation between the actual level of wheeling losses and the approved level shall be dealt with, as part of the Mid-term Performance Review, in accordance with the mechanisms provided in Regulation 10.

79 Wires Availability

79.1 The target Wires Availability for full recovery of Return on Capital Employed for Wires Business shall be as under:

(a) Rural Areas	90 percent
(b) Towns and cities	95 percent

Provided that the Commission may stipulate a trajectory for achieving the target Availability for Wires Business of the Distribution licensee as part of the Order on the Business Plan filed by the Distribution Licensee:

Provided that for every 1 percent under-achievement in Wires Availability, Rate of Return on Capital Employed shall be reduced by 0.1%.

Provided that for every 1 percent over-achievement in Wires Availability, Rate of Return on Capital Employed shall be increased by 0.1%.

79.2 Wires Availability shall be computed in accordance with following formulae

$$\text{Wires Availability} = (1 - (\text{SAIDI} / 8760)) \times 100$$

where

SAIDI = Sum of all Customer interruption durations/Total number of customers served

79.3 Wires Availability will be measured over the course of a year and will be expressed in percentage terms.

PART I: RETAIL SUPPLY OF ELECTRICITY

80 Applicability

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

81 Components of Tariff

81.1 The tariff for retail supply by a Distribution Licensee shall provide for recovery of the aggregate revenue requirement of the Distribution Licensee for each year of the Control Period, as approved by the Commission and comprising the following: -

Aggregate revenue requirement:

- (a) Return on Capital Employed;
- (b) Depreciation;
- (c) Cost of own power generation /power purchase expenses;
- (d) Transmission charges;
- (e) Operation and Maintenance expenses;
- (f) Interest on working capital and on consumer security deposits; and
- (g) Adjustment of Contribution to contingency reserves

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

- (h) Non-tariff income;
- (i) Income from Other Business, to extent specified in these Regulations;
- (j) Receipts on account of cross-subsidy surcharge; and

81.2 The tariff for retail supply by 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 C of these Regulations.

81.3 The Distribution Licensee shall be allowed to offer a rebate to the consumers on tariff and charges determined by the Commission:

Provided that the Distribution licensee shall submit details of such rebates to the Commission every quarter, in the manner and format, as stipulated by the Commission from time to time.

Provided that the impact of such rebates on the Distribution licensee will be borne entirely by the Distribution Licensee and impact of such rebate will not be allowed by the Commission to be passed through to the consumers, in any form.

Provided that such rebates should not to be offered selectively to any consumer/s, and will have to be offered to the entire consumer category/sub-category/consumption slab in a non-discriminatory manner.

82 Multi-year tariffs

- 82.1 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, 2011.

83 Business Plan

- 83.1 The Distribution Licensee shall submit a Business Plan with full details as stipulated by the Commission from time to time, in the manner as specified in Part B of these Regulations.

84 Capital Investment Plan

- 84.1 The Distribution Licensee shall submit a Capital Investment Plan with full details of his proposed capital expenditure projects to the Commission for approval, along with the Business Plan:
- 84.2 The Capital Investment Plan shall cover all capital expenditure projects of a value exceeding Rs. Ten (10) crore and shall be in such form as may be stipulated by the Commission from time to time.
- 84.3 The Distribution licensee shall submit the Capital Investment Plan in accordance with Regulation 7 of these Regulations.
- 84.4 The Commission shall approve the Business Plan in accordance with the principles specified in these Regulations.

85 Capital Cost

- 85.1 The approved Business 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, 2011 with a value exceeding Rs. Ten (10) crore.
- 85.2 For each capital expenditure project, the sum total of allowable capital cost from the date of commencement of such project till the date of commissioning shall be the original cost of such project:
- 85.3 The provisions of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India , as amended from time to time, 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.
- 85.4 The amount of any contributions made by consumers and Distribution System Users towards works for Retail Supply by the Distribution Licensee shall be deducted from the original cost for such project for the purpose of calculating the Regulated Rate Base, as provided in Regulation 29.
- 85.5 The capital cost shall be allowed as provided in the Regulation 26.

86 Sales forecast

- 86.1 The Distribution Licensee shall submit a monthly forecast of the expected sales of electricity to each tariff category/sub-category and to each tariff slab within such tariff category/sub-category to the Commission for approval along with the Business Plan, as specified in these Regulations.

86.2 The Distribution Licensee shall submit the application for determination of tariff, based on the approved sales forecast in the Order on Business Plan:

86.3 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.

87 Calculation of Aggregate Revenue Requirement

87.1 Return on Capital Employed

87.1.1 The Distribution Licensee shall be allowed a return on capital employed as specified in Regulation 29 of these Regulations.

87.2 Depreciation

87.2.1 The Distribution Licensee shall be permitted to recover depreciation on the value of fixed assets used in the Distribution Business as specified in Regulation 30 of these Regulations.

87.3 Cost of power generation/power purchases

87.4 The Distribution Licensee shall be allowed to recover the cost of power generated by the Generation Business or purchased from approved sources for supply to consumers based on the power procurement plan of the Distribution Licensee, approved as part of Order on Business Plan, as per Regulation 7 and in the manner as stipulated in Part-D of these Regulations.

87.5 Transmission charges

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

87.6 Operation and Maintenance expenses

87.6.1 The Distribution Licensee shall be permitted to recover Operation and Maintenance expenses relating to the Retail Supply of electricity as specified in the Norms below for each year of the Control Period:

FY 2011-12

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
For Sales in Supply Business (Paise/kWh)	8	7	7	9	8
For Consumers in Supply Business (Rs Lakh/000 Consumer)	4.6	8.0	8.0	NA	4.6
For GFA of Supply Business (% of Opening GFA)	0.45%	0.45%	0.45%	0.15%	0.45%

FY 2012-13

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
------------------------	---------------	-----------------	-------------	--------------	--------------

FY 2012-13

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
For Sales in Supply Business (Paise/kWh)	7	6	6	9	7
For Consumers in Supply Business (Rs Lakh/'000 Consumer)	4.88	8.44	8.44	NA	4.88
For GFA of Supply Business (% of Opening GFA)	0.45%	0.45%	0.45%	0.15%	0.45%

FY 2013-14

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
For Sales in Supply Business (Paise/kWh)	6	5	5	10	6
For Consumers in Supply Business (Rs Lakh/'000 Consumer)	5.2	8.9	8.9	NA	5.2
For GFA of Supply Business (% of Opening GFA)	0.45%	0.45%	0.45%	0.15%	0.45%

FY 2014-15

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
For Sales in Supply Business (Paise/kWh)	6	5	5	10	6
For Consumers in Supply Business (Rs Lakh/'000 Consumer)	5.5	9.4	9.4	NA	5.5
For GFA of Supply Business (% of Opening GFA)	0.45%	0.45%	0.45%	0.15%	0.45%

FY 2015-16

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D	MPECS
For Sales in Supply Business (Paise/kWh)	5	5	5	11	5
For Consumers in Supply Business (Rs Lakh/'000 Consumer)	5.8	10.0	10.0	NA	5.8
For GFA of Supply Business (% of Opening GFA)	0.45%	0.45%	0.45%	0.15%	0.45%

87.7 Interest on working capital

87.7.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital, as specified in Regulation 31 of these Regulations.

87.8 Adjustment of Contribution to contingency reserves

87.8.1 Contingency Reserves of the Distribution Licensee shall be adjusted in Revenue Gap determination, as specified in Regulation 32 of these Regulations.

88 Non-Tariff Income

- 88.1 The amount of non-tariff income relating to the Retail Supply Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in calculating the tariff from retail supply 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.

89 Income from Other Business

- 89.1 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 tariff from retail supply of electricity by 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, 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.

90 Receipts on account of cross-subsidy surcharge

- 90.1 The amount received by the Distribution Licensee by way of cross-subsidy surcharge, as approved by the Commission in accordance with the Maharashtra Electricity Regulatory Commission (Distribution Open Access) Regulations, 2005, as amended from time to time, shall be deducted from the Aggregate Revenue Requirement in calculating the tariff for retail supply of electricity by such Distribution Licensee.

91 Distribution Losses

- 91.1 The Distribution Licensee shall be allowed to recover the approved level of distribution losses arising from the Retail Supply of electricity, excluding wheeling losses :

Provided that the Commission may stipulate a trajectory for distribution losses for Retail Supply of electricity in accordance with these Regulations as part of the Order on the Business Plan filed by 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 Mid-term Performance Review and at the time of final truing up at the end of the Control Period.

92 Supply Availability

- 92.1 Supply Availability shall comprise of following parameters in the proportion as mentioned below:

(a) Base load Supply Availability	75 percent
-----------------------------------	------------

(b) Peak load Supply Availability

25 percent

- 92.2 Target Supply Availability for full recovery of Return on Capital Employed for Retail Supply of electricity is 95 percent.

Provided that the Commission may stipulate a trajectory for achieving the target Supply Availability for Retail Supply of electricity as part of the Order on the Business Plan filed by the Distribution Licensee:

Provided that for every 1 percent under-achievement in Supply Availability, rate of Return on Capital Employed shall be reduced by 0.1%.

Provided that for every 1 percent over-achievement in Supply Availability, rate of Return on Capital Employed shall be increased by 0.1%.

- 92.3 Base load Supply Availability shall be computed in accordance with following formula:

$$= \frac{(\text{Actual Contracted Base Load Supply in MW}) \times (\text{No of Off-Peak hours})}{(\text{Base load in MW}) \times (\text{No of off Peak hours})}$$

- 92.4 Peak load Supply Availability shall be computed in accordance with following formula:

$$= \frac{(\text{Actual Contracted Peak Load Supply in MW}) \times (\text{No of Peak hours})}{(\text{Peak load in MW}) \times (\text{No of Peak hours})}$$

PART J: GRANT OF SUBSIDIES BY STATE GOVERNMENT

93 Manner of provision of subsidy by State Government

- 93.1 With effect from the first day of April 2011, 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 Distribution Licensee/person affected by the grant of subsidy in the manner specified in this Regulation, with prior approval of the Commission.

- 93.2 The amount of subsidy agreed to by the State Government shall be provided in the form of grant by the State Government.

- 93.3 The subsidy shall be passed on to eligible consumers through credit in their electricity bills only in proportion to the extent to which the total requirement of the Distribution 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.

93.4 The Distribution 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 K: MISCELLANEOUS

94 Power to amend

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

95 Power to remove difficulties

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.

96 Repeal and savings

96.1 Save as otherwise provided in these Regulations, the "Maharashtra Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2005" are hereby repealed.

96.2 Notwithstanding such repeal, any proceedings before the Commission pertaining to the period till FY 2010-11, including review petitions, shall be governed by MERC (Terms and Conditions of Tariff) Regulations, 2005.

Annexure-I**DEPRECIATION SCHEDULE**

Description of Assets		Depreciation (Straight line) (%)
A.	Land owned under full title	--
B.	Land held under lease	
a)	for investment in the land	3.34
b)	for cost of clearing the site	3.34
c)	Land for reservoir in case of Hydro generating station	3.34
C.	Assets Purchased New:	
a.	Plant and machinery in generating stations including plant foundations	
i)	Hydro-electric	5.28
ii)	Steam electric	5.28
	NHRS & Waste Heat Recovery Boilers/Plants	
iii)	Diesel-electric and gas plant	5.28
b.	Cooling towers and circulating water systems	5.28
c.	Hydraulic works forming part of Hydro-electric systems including:-	
i)	Dams, Spillways, weirs, canals, reinforced concrete Flumes and siphons	5.28
ii)	Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and other hydraulic works	5.28
d.	Building & civil engineering works of permanent character	
i)	Offices & showrooms	3.34
ii)	Containing thermo-electric generating plant	3.34
iii)	Containing hydro-electric generating plant	3.34

Description of Assets			Depreciation (Straight line) (%)
	iv)	Temporary erection such as wooden structures	100
	v)	Roads other than kutcha roads	3.34
	vi)	Others	3.34
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	5.28
	ii)	Others	5.28
f.		Switchgear including cable connections	5.28
g.		Lightning arrestors	
	i)	Station type	5.28
	ii)	Pole type	5.28
	iii)	Synchronous condensor	5.28
h.		Batteries	5.28
	i)	Underground Cable including joint boxes and disconnected boxes	5.28
	ii)	Cable duct system	5.28
i.		Overhead lines including supports:	
	i)	Lines on fabricated steel operating at nominal voltages higher than 66 kV	5.28
	ii)	Lines on steel supports operating at nominal voltages higher than 13.2 kilovolts but not exceeding 66 kilovolts	5.28
	iii)	Lines on steel or reinforced concrete supports	5.28
	iv)	Lines on treated wood supports	5.28
j.		Meters	5.28
k.		Self propelled vehicles	9.50
l.		Air conditioning plants:	

Description of Assets			Depreciation (Straight line) (%)
	i)	Static	5.28
	ii)	Portable	9.50
m.			
	i)	Office furniture and fittings	6.33
	ii)	Office equipments	6.33
	iii)	Internal wiring including fittings and apparatus	6.33
	iv)	Street light fittings	5.28
n.		Apparatus let on hire	
	i)	Other than motors	9.50
	ii)	Motors	6.33
o.		Communication equipment:	
	i)	Radio and high frequency carrier system	6.33
	ii)	Telephone lines and telephones	6.33
p.		I.T. equipments	15
q.		Assets purchased second hand and assets not otherwise provided for in the Schedule	5.28

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 _o | is | Availability of o number of AC lines. |
| p | is | Total number of switched bus reactors . |
| AV _p | is | Availability of p number of switched bus reactors. |
| q | is | Total number of ICTs. |
| AV _q | is | Availability of q number of ICTs. |
| r | is | Total number of SVCs. |
| AV _r | 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

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

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

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

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

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

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

- Where W_i = Weightage factor for i^{th} transmission line
 W_j = Weightage factor for j^{th} HVDC pole
 W_k = Weightage factor for k^{th} ICT
 W_{lI} & W_{lC} = Weightage factors for inductive & capacitive operation of l^{th} SVC
 W_m = Weightage factor for m^{th} bus reactor
 W_n = Weightage factor for n^{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^{th} AC line, j^{th} HVDC pole, k^{th} ICT, l^{th} SVC (Inductive Operation), l^{th} SVC (Capacitive Operation), m^{th} Switched Bus Reactor & n^{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)

$T_{NAi}, T_{NAj},$ The non-availability hours (excluding the time period for outages not

T_{NAk} , T_{NAj} ,
 T_{NACl} , T_{NAM} , attributable to transmission licensee taken as deemed availability as per Para 5 of the procedure) for i^{th} AC line, j^{th} HVDC pole, k^{th} ICT, l^{th} SVC (Inductive Operation), l^{th} SVC (Capacitive Operation), m^{th} Switched Bus Reactor & n^{th} HVDC back-to-back block.

APPENDIX – II

SURGE IMPEDANCE LOADING (SIL) OF AC LINES

S.No.	Line voltage (kv)	Conductor Configuration	SIL (MW)
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:____, 2010

(K.N Khawarey)
Secretary,
Maharashtra Electricity Regulatory Commission